THE GEOGRAPHICAL DIMENSIONS OF PARTNER CHOICE

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The geographical dimensions of partner choice

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VOORWOORD

Bijna 10 jaar ben ik als medewerker verbonden geweest aan de Faculteit Ruimtelijke Wetenschappen van de Rijksuniversiteit Groningen, eerst als universitair docent en later als promovendus. In al die jaren heb ik er met ontzettend veel plezier gewerkt. Het internationale karakter van de basiseenheid Demografie en de opleiding die er wordt verzorgd en het leuke contact tussen staf, phd's en studenten heb ik altijd zeer gewaardeerd. Met dit proefschrift komt er een eind aan deze tijd, en daarmee een tijd om mensen te bedanken.

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Karen Haandrikman
Groningen, mei 2010

TABLE OF CONTENTS

The chapters included in this PhD dissertation are reprinted from the following publications and manuscripts:

Chapter 2
Haandrikman, K., Harmsen, C. Van Wissen, L.J.G. and Hutter, I. (2008), Geography matters: Patterns of spatial homogamy in the Netherlands. *Population, Space and Place* 14 (5): 387-405.

Chapter 3
Haandrikman, K., Van Wissen, L.J.G. and Harmsen, C. (2009), Explaining spatial homogamy. Compositional, spatial and regional cultural determinants of regional patterns of spatial homogamy in the Netherlands. *Applied Spatial Analysis and Policy*. DOI : 10.1007/s12061-009-9044-6.

Chapter 4
Haandrikman, K. and Van Wissen, L.J.G. Regional variation in short distance homogamy and spatial heterogamy.
Submitted to an international journal.

Chapter 5
Haandrikman, K. (2010), Waar ontmoeten partners elkaar? Sociale differentiatie in ontmoetingsplaatsen. [Where do partners meet? Social differentiation in meeting places.] *Mens en Maatschappij* 85 (2): 176-195 (in Dutch).

Chapter 6
Haandrikman, K. and Van Wissen, L.J.G. Explaining the flight of Cupid's arrow: a spatial random utility model of partner choice.
Submitted to an international journal.

Chapter 7
Haandrikman, K. and Hutter, I. 'That's a different kind of person' – Spatial connotations and partner choice.
Submitted to an international journal.

1 INTRODUCTION

1.1 Motivation for this study

Studies have established that around the world, individuals tend to find partners who are similar to themselves. This phenomenon, known as assortative mating, has predominantly been investigated by exploring the similarity between partners concerning education, occupation, social origin, religion and age. Relationships in which partners are similar to one another are called homogamous. The research focus has mostly been directed towards the level of homogamy or the rate of intermarriage, the extent to which homogamy changes over time, the variation of homogamy across groups, and the factors that are related to homogamy (Kalmijn 1998). The spatial dimension represents an under-researched component of partner choice. The most relevant studies were outdated, were based on historical data and were restricted to cities or small regions. An example is Bossard's propinquity (proximity) study (1932) in Philadelphia, where one-third of all married couples were found to live within five blocks from each other before marriage. Most studies conducted within the Netherlands examined marital horizons of those living in specific cities or provinces (see Van Poppel and Ekamper 2005 for an overview). In this dissertation, a number of articles are collected in which the scope of homogamy studies is extended by the inclusion of the spatial dimension.

Greater participation in education, more social and spatial mobility, individual affluence and opportunities to travel combined with internet access and the accompanying opportunities to find life partners from basically all over the world, geography may no longer be a pivotal factor in partner choice. In the past, most found their partners close by as distances were more difficult to bridge, and the opportunities to meet partners from further away were much more limited. How

partners are found seems to have changed substantially in the past decades. This study explores the partner choices that people make, given the unlimited supply of partners to choose from. In the case of such a large partner market, what is the meaning of distance in the partner choice process? Does distance only represent practicalities such as time, energy and costs, or do people attach other meanings to distance as well, such as cultural meanings? In the 21st century, distances to partners may be affected by partner preferences, the influence of others, and the opportunities to meet partners. Which role does geographical distance play in the partner choice process?

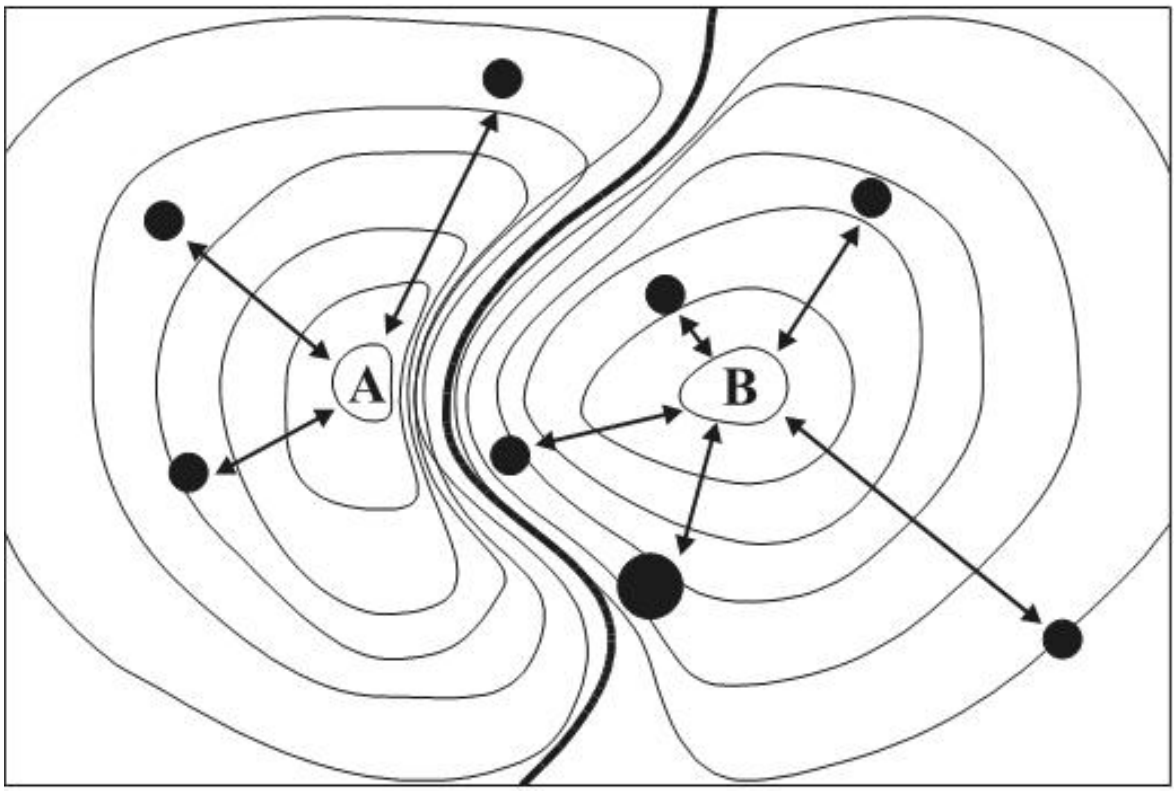
1.2 Research approach

Partner choice may be addressed in different ways, depending on the perspective taken by the researcher. Most studies make use of economic, psychological, biological or sociological theories. Economists explain individuals' assortative behaviour in the marriage market by using the concepts of demand and supply (e.g. Becker 1973; 1981; Burdett and Coles 1997; Dribe and Lundh 2005). Individuals are viewed as competitors in their search for a partner, and ideas from job search theory and game theory are applied to the partner choice process. Psychologists are mainly interested in the preferences that people have for future partners and in the complementarities between partners (for instance, dominance as opposed to submissiveness) (e.g. Buss 1994; Winch 1971), whereas biologists are primarily concerned with the effect of partner choice on the genetic structure of the population (e.g. Barrai et al. 2002). Sociologists study partner choice as a form of social interaction, influenced by the environment, including institutions and networks (e.g. Shannon and Nystuen 1972). Partner choice is seen as the result of three factors: partner preferences, social and cultural norms, and opportunities on the partner market (Kalmijn 1991; 1998; Van de Putte 2003).

The main approach used by geographers stems from physics: the flows of people between locations are explained by the laws of gravitation (Haynes and Fotheringham 1984; Walmsley and Lewis 1993). As Tobler (1970) stated in his general law of geography: 'everything is related to everything else, but near things are more related than distant things' (p. 236). Consistent with the gravity model, flows of people can be predicted based on the knowledge about distance and settlement size (Catton and Smircich 1964; Zipf 1949). Applied to partner selection, a person may be attracted to anyone else, but near candidates are more attractive than distant candidates. The probability of finding a partner decreases as distance increases, and if the population is unequally distributed spatially, then the probability of finding a partner is greater in areas with higher population density.

This hypothetical geographical process can therefore be described with a spatial gravity model.

Figure 1. Partner choice determined by distance and other spatial factors



This dissertation uses geographic, economic and sociological theories to explain and understand spatial homogamy. Our basis is the spatial gravity model, in which only distance determines the probability of finding a partner. Deviations from the theoretical model indicate specific (spatial) factors that play a role in the process of partner choice. Figure 1 shows a cartographical view of the contours of a model in which geographical factors other than distance are important in the probability of finding a partner. Here, the influence of spatial factors leads to indentations in the distance contours and to frontier effects (i.e. the probability of choosing a person at the other side of the border is very small). Candidates (represented by the black dots) from location A seem to avoid candidates from location B on the partner market. The analysis of residuals - comparing the empirical model with the theoretical model in which distance and population distribution determine the probability of finding a partner - indicates the importance of factors with a clear spatial pattern. The indentation in the contour map suggests the existence of specific spatial barriers. Possible explanations for the existence of spatial barriers may be found in:

- Compositional effects of the population such as demographic, educational or other characteristics that are unequally distributed across space;
- The importance of factors that exhibit a strong spatial pattern, such as local cultural differences, for example denomination, dialect, the distinction between urban and rural, and other factors that may contribute to spatial identity;
- The spatial pattern of institutional contexts that may increase meeting probabilities, such as bars, schools, churches, and so forth.

1.3 Research questions and outline of the dissertation

This dissertation consists of a collection of articles which all concern the spatial dimension of the partner market. Spatial homogamy, the similarity regarding the geographic origin of partners, is the subject matter connecting each paper. The main objective of the overall study is to gain insight into the spatial dimensions of partner choice in the Netherlands.

The innovation of this dissertation is the addition of the geographical dimension to other kinds of homogamy. Educational, social, religious, age and cultural homogamy each have a spatial dimension, as similar people tend to cluster in space. The spatial dimension in homogamous relationships is isolated from other homogamy dimensions, in order to investigate if the role of geography in partner choice is merely an artefact of other determining factors, or if it is an important independent dimension of homogamy and partner choice.

Another unique feature of the dissertation is that the phenomenon of spatial homogamy is approached in descriptive, exploratory and explanatory ways, using a variety of data and methods. Whereas there are few recent studies on spatial homogamy, and the existing ones are based on small populations, this current research is based on register data involving the partner choice of all Dutch married and unmarried cohabiters in recent times. These micro data not only enable an explorative study of the partner choice of a whole population, but also allows an explanatory approach of spatial homogamy, as recent developments in the compilation and linkage of large micro-level data sets has provided the opportunity to examine the correlates of spatial homogamy. Plus, linkage with the geographic coordinates of individual addresses which allows the study of the spatial dimensions of partner choice in many facets. These include the measurement of the exact geographic distance between the individual house addresses of partners at birth and before cohabitation, a spatial micro model of homogamy based on individual register data, as well as two spatial analyses of determinants of spatial variation in spatial homogamy, using GIS-tools on aggregated register data. Notwithstanding the many advantages of using data from registers on studying partner choice, the data do no reveal where partners

meet, the types of preferences people had before they met their partner, and which meaning individuals attach to distance when considering partner selection. Therefore, the dissertation also utilizes survey data on union formation as well as qualitative data gathered through focus group discussions on partner choice and the meaning of distance in partner choice. The combination of both quantitative and qualitative data provides a unique perspective on spatial homogamy. National and regional patterns of spatial homogamy are distinguished, factors influencing spatial homogamy and its spatial variation are discerned, and matching mechanisms of partner choice can be revealed.

As a starting point, chapter 2 is an explorative, descriptive study on the role of geographical distance in partner choice in the Netherlands. Distances at which partners are found are examined, as well as the variation of these distances across groups. Chapter 2 is aimed at answering the first research question:

1. What is the level of spatial homogamy in the Netherlands, and how does it vary across demographic and spatial characteristics of partners?

The second research question is based on findings from previous studies in which marital distances were found to differ across groups. As spatial homogamy is expected to vary considerably across regions within the Netherlands, and given the possible explanations for spatial barriers described earlier, chapter 3 aims to explain the regional variation in spatial homogamy by examining three sets of explanations: compositional factors, specific spatial determinants and regional cultural differences. This explanatory chapter focuses on the second research question:

2. How can regional variation in spatial homogamy be explained?

The reverse of spatial homogamy is spatial heterogamy, or the extent to which partners are chosen from far away. Based on the composition of the population, specific geographic factors and cultural differences, both spatial homogamy and spatial heterogamy are expected to vary spatially. This is the focus of chapter 4, in which the spatial variation in these two phenomena is discussed, to answer the following research question:

3. Which factors explain regional differences in choosing partners from the same area, and which factors explain regional differences in choosing partners from abroad?

As people generally meet before a relationship starts, the role of meeting places in the partner choice process seems vital given our interest in the role of space and place in partner choice. As little research has been done into where partners meet each other, chapter 5 aims to gain insight into this issue, and describes whether patterns have changed over time. Moreover, as previous studies found that meeting places can be classified according to a social hierarchy, chapter 5 will also provide an understanding of the social differentiation in meeting places. The fourth research question runs as follows:

4. Where do partners meet and are meeting places socially differentiated?

To disentangle the effect of the spatial dimension of partner choice apart from demographic, socioeconomic and cultural homogamy, chapter 6 models all four types of homogamy together. This paper uses a micro model of homogamy, which captures the relative contributions of all homogamy types including spatial homogamy, to partner matching. Chapter 6 aims to answer the following research question:

5. How important is spatial homogamy compared to other types of homogamy in partner matching?

Chapter 7 examines the meaning of distance in partner choice in a rural village in the eastern Netherlands, Vriezenveen, which was chosen based on findings of preceding papers. Based on sociological theories of partner choice, the importance of preferences, norms and opportunities in the decision-making process preceding partner choice are studied. The qualitative approach enables a study of the way in which individuals deal with geographical distance when choosing a partner, and what it means to them. This part of the dissertation contextualizes the patterns of spatial homogamy found in the foregoing chapters, and aims to answer the following research question:

6. How do people select a partner, and how is geographical distance incorporated in the preferences, norms and opportunities that lead to partner choice?

1.4 Data and methods

The research questions call for a mixed methods design, in which both quantitative and qualitative data are used. Given the previous small-scale studies on spatial homogamy, this dissertation intends to conduct a large-scale research,

based mostly on register data. The municipal population register ('Gemeentelijke Basisadministratie', hereafter *GBA*) is a decentralized automated population registration system that is managed by the individual municipalities. In the GBA, information on each registered inhabitant is stored, including residential address and birth place. As inhabitants are obliged to register house moves in the Netherlands, rich records of residential histories are available. Individuals can be linked to spouses and children on the basis of a personal identification number. The dataset created for this study consists of all 326,000 new cohabiters in the Netherlands in 2004, married and unmarried, linked to their cohabitation partner. In collaboration with Statistics Netherlands, the data is linked to other relevant records, namely geographic (Geographic Base Register), educational (CRIHO files) and tax registers (Social Statistical File). For each individual and his or her partner, the data set includes the geographic coordinates of their current and former addresses including their place of birth, demographic, educational and occupational information. The availability of information on individuals choosing a partner, including their specific residential addresses over time enables us to fully cover the spatial dimensions of partner choice.

The explorative analyses include descriptive analysis, mapping and geovisualisation, and the use of confidence intervals of median distances between partners to account for the variation of spatial homogamy across groups. The data also allows the modelling of geographical dimensions compared to other relevant correlates of partner choice. A spatial choice model using random utility theory is used to identify the importance of spatial homogamy compared to other types of homogamy.

To display and explain regional variation in spatial homogamy, both exploratory spatial data analysis and spatial modelling are employed. The latter takes into account the occurrence of spatial autocorrelation in the phenomenon of investigation as it might bias results.

To uncover the matching mechanisms of partner choice, the meeting places of partners and their correlates are important to incorporate. As this kind of information is not available in registers, survey data about union formation from the 2003 Fertility and Family Survey (Onderzoek Gezinsvorming 2003) is utilized. The survey was conducted by Statistics Netherlands among 3,900 men and 4,200 women, aged 18 to 62 years, and includes data on how or where partners were met. Multionomial logistic regression methods are used to investigate the social differentiation of meeting places.

Finally, to reveal the decision-making process preceding partner choice, a qualitative approach is employed. Focus group sessions are conducted to explore, contextualise and illustrate the spatial dimensions of partner choice.

1.5 Social relevance of this study

The choice of a partner is a very personal and private decision, but can also have major societal implications. Patterns of partner choice reveal something about underlying social phenomena such as social cohesion and social integration (Smits 1996). They are an indication of the level of social contact between groups. When people choose their partner within a group, internal cohesion may be high within the group, but social distance between groups in society may be large. Changing patterns of partner choice signal social change; increasing intermarriage between groups points to increasing social openness and integration.

Partner market studies are relevant for geographers, historians, planners and sociologists. Geographers use marriage patterns as an indication of the amount of information that is exchanged between locations. They are a sign of the geographical range of social and economic activities, and of the geographical distribution of knowledge of people and places around a home base. High levels of endogamy (partner choice within the group) tend to indicate relative isolation of groups, used by historians to describe community identities. Moreover, union formation is one of the main motives for migration, and therefore research findings on partnering may be used by geographers and demographers. In addition, demographers are interested in partner choice as it impacts union stability, fertility, and thus population growth. Similarly, planners may be interested in the geographic origins of couples for the planning of housing, health provision and social services.

Relationships in which partners are similar tend to last longer (Janssen et al. 1999). Homogamy is generally associated with a high level of emotional wellbeing among partners, as similarity leads to compatibility of interests, values and lifestyle in general (Kalmijn 1998). Partnership stability can impact upon resources, female labour participation, allocation of leisure and other household resources, income and inequality. Finally, the characteristics of mutual partners affect the genetic natural selection process.

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2 GEOGRAPHY MATTERS: PATTERNS OF SPATIAL HOMOGAMY IN THE NETHERLANDS[1]

ABSTRACT

'Cupid may have wings, but apparently they are not adapted for long flights.' Studies on the spatial dimension of the partner market have found that the number of marriages declines as the distance between potential spouses increases. This paper explores the role of geographical distance in partner choice in the Netherlands. The availability of unique integral micro data from the population register enables us to study spatial homogamy among all new cohabiters. Spatial homogamy is measured by calculating distances between partners before cohabitation. The explorative study shows that geography matters: Dutch persons choose spatially homogamous partners. Spatial homogamy is influenced by demographic factors. With increasing age, spatial homogamy increases. Moreover, those who live with their parents and those who are single parents before cohabitation live significantly shorter to their future partners. Spatial homogamy also exhibits a distinct spatial pattern. However, conditional on population size and geographical location, long distances between partners in peripheral areas become insignificant. Finally, the distance between partners decreases as urbanisation increases. The findings stimulate the discussion on the role of cultural factors in partner choice.

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2.1 Introduction

'Cupid may have wings, but apparently they are not adapted for long flights.' This citation from Bossard (1932) recapitulates the topic of this study: the spatial dimension of the partner market.

Studies have found that around the world, individuals tend to look for a partner with similar characteristics. This similarity between marriage partners is referred to as homogamy. The homogamy literature has mostly focused on the characteristics that partners have in common, and the reasons why people marry homogamously.

Empirical work on homogamy has mostly concentrated on the level of homogamy, the variation in homogamy across groups, the extent to which homogamy changes over time, the factors that are related to homogamy, and how these factors overlap (Kalmijn 1998). The *characteristics* most examined in relation to homogamy are race/ethnicity, religion and socio-economic status. Differences according to sex, education, and region are among the most studied *variations* in homogamy (Kalmijn 1998). Among the trends in homogamy identified across the world, as summarised by Kalmijn (1998), are an increase in intermarriage among ethnic groups, an increase in religious intermarriage, and increases as well as decreases in educational homogamy. Most research on the Dutch situation has focused on the similarity of partners with regard to education and occupation (Smits 1996; Ultee and Luijck 1990; Uunk 1996; Uunk and Kalmijn 1996; Uunk and Ultee 1995), religion (Hendrickx, 1994; 1998), cultural participation (Uunk 1996), and social origin (Van Tulder 1972). Hendrickx (1998) found no significant increases in educational homogamy, whereas Uunk (1996) found a decline in occupational homogamy in the last decades in the Netherlands. Religious homogamy was found to have decreased in the period from the Second World War until 1977, while in the 1980s the trend reversed (Hendrickx 1998). Protestant denominations, such as the Re-Reformed, are more endogamous than the more liberal denominations as far as marriage is concerned.

Spatial homogamy, or sharing a similarity in geographical origin, is a dimension which has been under-researched in homogamy studies. There are a handful of international studies that discuss spatial homogamy (Clegg et al. 1998; Coleman 1979; Coleman and Haskey 1986; Fisher 1980; Küchemann et al. 1974; Mayfield 1972). Research on the spatial component of marriage markets has predominantly been done in the United States and the United Kingdom. In the United States in the 1940s and 1950s so-called propinquity studies were conducted, in which the proximity of bride and groom before marriage was examined. Examples of these studies are Bossard (1932) in Philadelphia, Davie and Reeves (1939) in New Haven, Koller (1948) in Columbus, Ohio, and Ellsworth

(1948) in Connecticut. For the United Kingdom, studies on marital distances include those by Küchemann et al. (1974) in Oxford, Coleman (1979) in Reading, Coleman and Haskey (1986) in England and Wales, and Clegg et al. (1998) in the Outer Hebrides. Most studies found that the number of marriages declines as the distance between potential spouses increases. For example, Bossard (1932) found that in Philadelphia one-third of all married couples lived within five blocks or less from each other before marriage, and Coleman and Haskey (1986) found that the most common distance between partners in England and Wales was one kilometre. An overview of several historical studies that demonstrate geographical homogamy in the Netherlands is given by Van Poppel and Ekamper (2005). Most studies examine marital horizons of those living in specific cities or provinces, such as the cities of Delft, Arnhem and Gouda and the province of Zeeland. The existing studies are mostly outdated, based on historical data, and most important of all, they are restricted to cities or regions.

The theoretical and empirical findings of this study may be useful to many disciplines. The effects of partner choice on the genetic structure of a population are of interest to population genetics. Increasing geographical distances between partners influence the genetic setup of human populations. Moreover, a rise in the number of marriages that are mixed in terms of ethnic or geographical origin are of great importance to societal processes, such as internal cohesion within groups, the extent of social distance between groups, and to integration and assimilation processes. The geographical origin of (marriage) migrants is of interest to the housing market. Hence, information on partner markets has been used in the context of urban planning (Spencer 1971, cf. Coleman 1979).

Migration and marriage patterns are governed by the interplay between distance and information. In this respect, geographers and historians use marriage patterns to chart the break-up of tight social communities, to describe the geographical range of social and economic activity, and to measure the spatial distribution of the knowledge of people and places around the home base or the 'information field' (Marble and Nystuen 1963; Morrill and Pitts 1967). The spatial dimension of partner choice indicates the changing role of geographical distance in social life.

To summarise, there are no studies on the role of geographical distance in partner choice for entire populations and countries. The availability of unique integral microdata enables us to give a comprehensive picture of spatial homogamy for all cohabiting couples in the Netherlands. In the paper, the pure locational component of spatial homogamy is disentangled from other spatial effects. Moreover, with these new data, the demographic variation in spatial homogamy is explored. The research questions addressed are as follows:

- What is the level of spatial homogamy for Dutch cohabiters?
- How does spatial homogamy vary according to demographic and spatial characteristics?
- Can spatial patterns in spatial homogamy be identified?

2.2 The role of distance in partner choice

Geographical distance influences partner choice in four ways. First, since proximity increases the likelihood of spontaneous social encounters between people that offer opportunities for interaction, distance decay is highly relevant in the probability of partner choice. Bossard (1932) was the first to report that people tend to marry those who live in close proximity, and his work was followed by many, primarily American studies that drew similar conclusions. Moreover, people who live close to each other often attend the same schools, shop in the same stores, and so on, increasing the opportunities for meeting (Goode 1982).

A second way in which distance influences partner choice, is that the act of bridging distance involves time, energy and costs. Marriages involving long distances between partners used to be rare since travelling was either impossible or very costly. In pre-industrial times, the geographical horizon of the activity pattern of most people did not exceed a few kilometres. In the course of the 19th century, mobility started to increase. Not only does an increasing portion of the population live outside their birthplace (Knippenberg and De Pater 1988), an ever larger share of the labour force commutes to work: in 1947 15 percent of the Dutch labour force commuted, while in 1986 the figure rose to 52 percent (Knippenberg and De Pater 1988). The increase in enrolment in higher education has also contributed to the increase in mobility: in 1961, 12 percent of all 20-year-old Dutch men were enrolled in full-time education, while by 1991 this figure had risen to 43 percent (Liefbroer 1999). A large proportion of young people leave the parental home to pursue an education, particularly those who enrol in vocational training institutes and universities. In addition, the increase in leisure time has contributed to the increase in mobility as well (Van Poppel and Ekamper 2005). These changes have almost certainly had an influence on the usual practice of choosing a marriage partner from one's region. More recently, the rise of the internet has increased the probability of a geographically distant partner. However, analysis of the 2003 Family and Fertility Survey shows that less than one percent of Dutch couples met their partner through the internet (Haandrikman 2007). Thus, although the chances for meeting a partner who lives far away have increased, the number of people who actually meet their partner through the internet is rather small. In summary, despite the increases in mobility, distance is still seen to play a role in partner choice.

The third way in which distance influences partner choice has to do with the fact that the population is unevenly distributed over space. The distribution, size and density of the population determine the number of people who live in close proximity, and therefore influence the opportunity to meet potential partners. Given the longer average distance to other people in the population, people in peripheral areas have to bridge longer distances to meet potential partners. Moreover, water masses or borders may act as physical barriers to social encounters.

Fourth, patterns of partner choice act as indicators of underlying cultural and sociological phenomena; they reveal something about social and cultural groups and borders in a society (Blau 1977; Smits 1996). People tend to live amongst people like themselves: social and cultural groups tend to cluster together in space. Educational level, occupational class, income, stage in the life course, religion, and ethnic background are all geographically clustered. These spatial clusters of people sharing similar characteristics increase the chance of finding a homogamous partner. This probability is further increased by the fact that people with similar characteristics not only tend to live in the same kind of neighbourhood, they also go to the same schools, shops, pubs, and so on (Winch 1971/1958). As people tend to look for homogamous partners and because these partners are often located nearby, the chance of finding a partner within short distance is increased. Moreover, the preference for a partner who shares similar cultural qualities, such as shared dialect, and views concerning religion and family values, stimulates the choice of a partner from the same or a culturally related region. This is based on the idea that people from the same region are thought to share cultural or emotional affinity, implying mutual confirmation of each other's behaviour and world views, leading to social confirmation and affection (Kalmijn 1998; Van Poppel and Ekamper 2005). The extent to which the inhabitants of a region are regionally conscious, that is, have a strong identification with that region (Paasi 2003) is presumed to further increase the chance of finding a partner close by. Regionally differentiated phenomena such as religious denomination and dialect may act as important markers of regional identity. Hence, spatially homogamy may reflect cultural factors such as religion and regional identity.

2.3 Variation in spatial homogamy

The level and variation in spatial homogamy are seen as the outcome of the four factors discussed above. Two core dimensions that cause variations in spatial homogamy are investigated: demographic and spatial.

2.3.1 The demographic dimension

Spatial homogamy has been found to vary by age. With rising age at marriage, the geographical distance between partners before marriage decreases (e.g. Clegg et al. 1998; Coleman and Haskey 1986). Coleman and Haskey (1986), in a study in England and Wales in 1979, found that the average marital distance for men is relatively low for those who marry in their teens, rises for men marrying in their thirties and decreases for older grooms. Household position and age constitute the stage in the life course. Spatial homogamy is expected to be influenced by stage in the life course; however, there are no other studies to corroborate this. The direction of the hypotheses concerning stage in the life course is therefore unclear beforehand. Probably, young adults living in the parental home, single elderly and those that are divorced or widowed have smaller geographical horizons than persons living alone, leading to increased spatial homogamy.

2.3.2 The spatial dimension

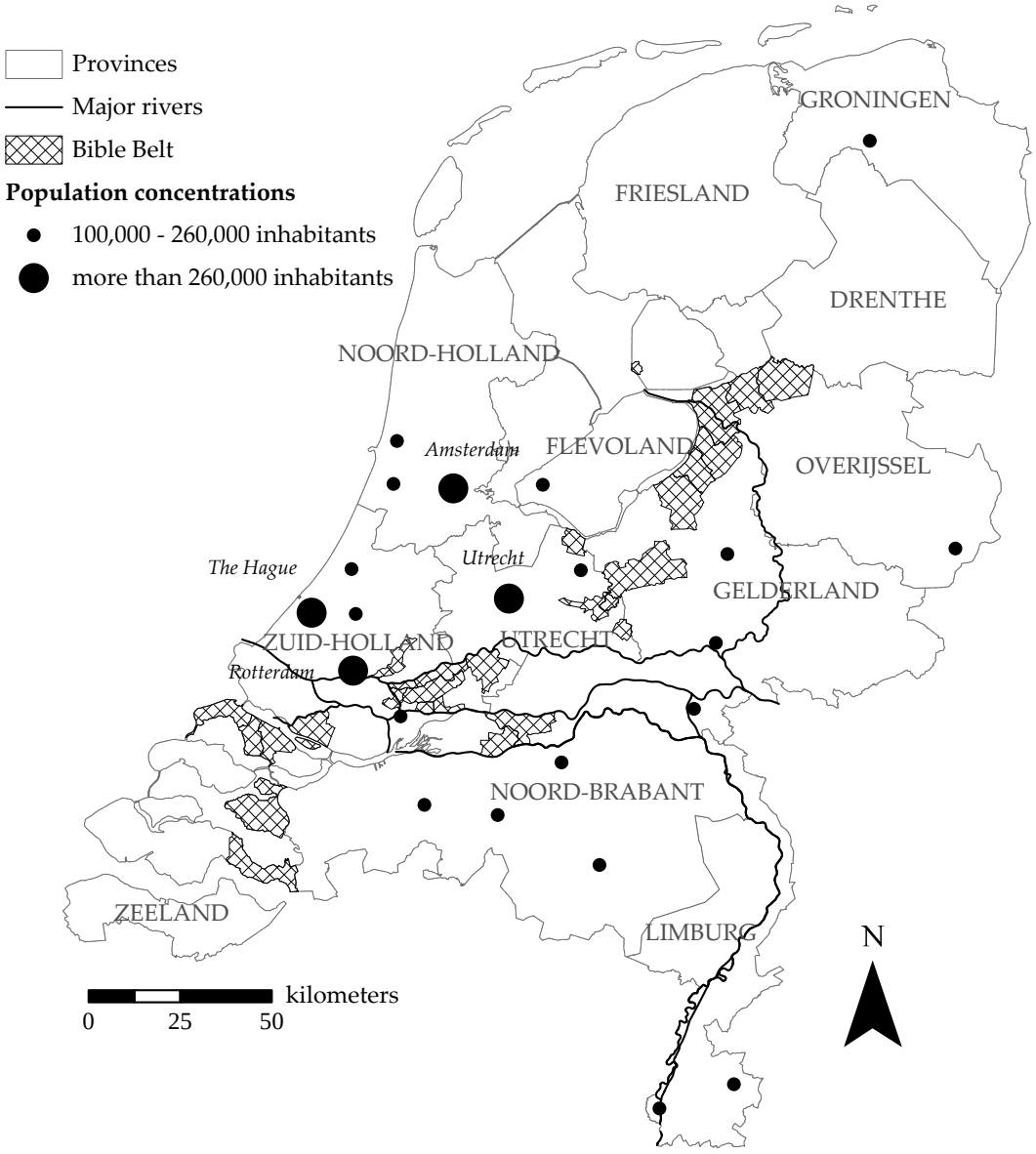
The extent to which people choose a partner who is spatially homogamous varies with geographical location. In many studies regional differences were found concerning marital distances, for instance Clegg et al. (1998) for the Outer Hebrides, and Bozon and Héran (1987) for France. Figure 1 shows the geography of the Netherlands. Maximum distances are about 340 kilometres north-south and 180 kilometres east-west, with a total surface of about 40,000 square kilometres.

Spatial homogamy may vary by population density and degree of urbanisation. However, the relation between population density and spatial homogamy is ambiguous. On the one hand, a higher population density in urban areas may lead to shorter distances between partners, since a city is sufficiently large to accommodate potential marriage partners for its inhabitants. In other words, spatial homogamy is expected to be greater in cities. On the other hand, high population density may also lead to increased distances between partners, because urban culture fosters new value orientations and open mindedness. People in urban areas may have more contacts and opportunities that enable them to meet partners in a larger range of meeting places that are distributed across a larger area. Indeed, Blau (1977) found that with increasing urbanisation, the probability of wide social circles increases.

As figure 1 demonstrates, the western part of the Netherlands (also known as 'Randstad'), comprised of the provinces of Noord Holland, Zuid Holland and Utrecht, is by far the most densely populated area. Given the absence of significant differences in elevation and the dense infrastructure system, *physical* attributes are not expected to act as serious geographical barriers to partner choice. The paper

will explore the relation between spatial homogamy and degree of urbanisation, but the direction of the relationship is not apparent in advance.

Figure 1. Geography of the Netherlands[2]



The spatial dimension of spatial homogamy is also affected by cultural factors that vary spatially such as religion and dialect. In the Netherlands, the geography of religion has been surprisingly stable over centuries. The south is predominantly Catholic, while the northern part is a mixed zone of liberal Protestants and non-denominationalists. In between the two zones, a strip of towns and villages

[2] The area symbolizing the Bible belt displays those municipalities in which more than 15 percent of eligible votes in the national parliamentary elections of 2003 were given to one of the two Christian democrat parties, i.e. Christen Union (CU) and Political Reformed Party (SGP).

stretching from the southwest to the north is known as the Bible belt (e.g. Knippenberg 2005) (see figure 1). A large share of inhabitants of the Bible belt are Orthodox Calvinists, characterized by rather conservative demographic behaviour such as more traditional views on marriage and relatively high fertility levels. As Sobotka and Adigüzel (2002) found that religion serves as a strong predictor of spatial demographic differences in the Netherlands, we expect that partners in the Bible belt are spatially homogamous.

2.4 Materials and methods

In order to examine the level of spatial homogamy for the whole of the Netherlands, vital statistics from the population register are used. The 'Gemeentelijke Basisadministratie' (GBA) is a decentralised automated population registration system, managed by the individual municipalities. In the GBA, information on each registered inhabitant of the country is stored. Each individual can be identified through a personal identification number (PIN), which enables linkage to spouses, children, and parents. So-called personal lists contain information on the person, the parents, marriage, registered partnership, widowhood and divorce, offspring, and address (Prins 2000). Since citizens have to report any change in address, residential addresses of inhabitants can be traced over many years[3]. While young people are known to be more often incorrectly registered than other groups, emigrants who fail to report their departure cause most problems in the registration. There is no official estimate, but according to Statistics Netherlands the number of unregistered inhabitants is not likely to be high (Prins 2000). In fact, the quality of the municipal population registers is held in very high regard (Prins 2000).

This study focuses on homogamy of partners who start living together, and it adopts Manting's (1994) definition of a union: 'a sexual and intimate relationship between a man and a woman in which the permanence of the relationship is assumed and a *common residence* is shared' (p. 13, italics added). This definition implies that shared living marks the start of a union. In the Dutch context, these unions include persons who are married, those who have a registered partnership, and those living together without a formal status (and exclude those people living together without a romantic relationship). For the remaining part of the paper, the whole group will be referred to as 'cohabiters'.

[3] Residential addresses in the Netherlands can be traced back to at least 1 October 1994, when the GBA system was introduced. Municipalities are allowed to convert addresses from before 1994 from the former personal cards into the automated register. As all personal cards are saved by the municipalities, the accounting of the population is complete, also before 1994 (personal communication with Kees Prins, Statistics Netherlands, 2008).

New cohabiters are tracked down from the register in several ways. Since marriages and registered partnerships are recorded by the local registrar, these events are directly documented in the GBA. Unmarried cohabiters are identified through household statistics. These annual statistics are constructed by linking the personal lists of persons living at the same address, based on their PINs. Households are divided into several household types, and the persons living in households are assigned a household position. There are four household positions that a partner in a couple may occupy: unmarried without children, married without children, unmarried with children, and married with children. The derivation of household position is based on the relationship of an individual to the reference person, his or her marital status, and possibly, children. If two people moved to the same address at the same date, Statistics Netherlands classifies them as a single two-person household. The remaining unmarried cohabiters are tracked down by using an imputation model to determine which persons living at the same address form a household. This logistic regression model, described in Israëls and Harmsen (1999) and Harmsen and Israëls (2003), is based on findings from the Labour Force Survey which supplies information on background variables.

To locate the new cohabiters, those living with a partner on 1 January 2005 but not living with a partner on 1 January 2004 are selected. In this way, we find that 289,248 persons started cohabitation at sometime in 2004. The largest share of new cohabiters is unmarried (see table 2), implying that a substantial proportion of the household positions is imputed. Since the imputation model may lead to overestimation of the number of cohabiting same-sex couples (Steenhof and Harmsen 2003), only heterosexual couples are selected for analysis.

As the objective of this paper is to explore the role of distance in partner choice, spatial homogamy is operationalised by measuring the geographical distances between the former addresses of new cohabiters. Although the meeting time is not known, we assume that the addresses of partners on 1 January 2004 approximate the addresses of partners when they met. Moreover, to compare the residential histories of partners, we compare the distance between partners just before cohabitation with the distance between the same partners 5 years prior to cohabitation, and the distance between the birth places of partners. Only addresses in the Netherlands are available, implying that partners living abroad before cohabitation are excluded from the analysis. For each partner, sex and age is known, as well as the marital status and household position for all points in time. Partners are matched to each other on current address.

To compute the distance between addresses, geographic coordinates from the national geographical reference system ('RD system') are used. The so-called ACN

coordinates (Adres Coördinaten Nederland) uniquely identify each postal address through the 6-digit postal code, house number and possible extensions. The ACN file of coordinates of addresses registered in the GBA on 1 January 2005 is used to match the coordinates to the cohabiters' addresses. Distances in metres are calculated by computing the Euclidian distance between the addresses.

The distance between partners at birth is measured by calculating the distance between the geographic coordinates of the geographical midpoints of the birth municipalities of both partners. Since municipal re-divisions have brought about many changes in municipal borders over the last century (the number of municipalities decreased from 1,121 in 1900 to 483 in 2004), the centroids of the municipalities in every single year since 1900 (since the birth year of the oldest cohabiter is 1900) have been calculated.

The maps are created using ArcGIS software, with municipality (N=483) as the regional unit of analysis. The ArcGIS and the GeoDa software (Anselin et al. 2006) are used to perform the explorative spatial data analysis.

2.5 Results

2.5.1 Descriptive statistics on cohabiters

There are 289,248 individuals or 144,624 opposite-sex couples who started living together in 2004. The distribution by age, marital status and household position is displayed in tables 1, 2 and 3.

Table 1. New cohabiters by age, 1 January 2005

Age group	Number	%
15-19	3,278	1.1
20-24	55,307	19.1
25-29	80,691	27.9
30-34	51,495	17.8
35-39	34,295	11.9
40-44	22,141	7.7
45-49	14,950	5.2
50-54	9,930	3.4
55-59	7,447	2.6
60-64	3,849	1.3
65-69	2,583	0.9
70-74	1,453	0.5
75-79	957	0.3
80-84	515	0.2
85-89	245	0.1
90-99	112	0.0
Total	289,248	100.0

Table 2. New cohabiters by current marital status, 1 January 2005

Current marital status	Number	%
never married	184,902	63.9
married	60,459	20.9
registered partnership	3,042	1.1
widowed	4,608	1.6
divorced	36,237	12.5
Total	289,248	100.0

Most new cohabiters are young people in their 20s and 30s (77 percent), and most are never married (64 percent) (table 2). From the never married people who started living together, 12 percent got married between 1 January 2004 and 1 January 2005. A fifth of the new cohabiters has children, of whom one-third are married and more than 40 percent are divorced. About half of the new cohabiters lived alone before cohabitation, while almost a third was living in the parental home. Whereas more than half of cohabiters in their twenties live in the parental home before cohabitation, most people that start living together in their thirties are living alone before. Although living alone before cohabitation is common in all age categories, the majority of older cohabiters (aged 30 and older) is living alone before. More men tend to live alone, whereas more women tend to be single parents before cohabitation.

Table 3. New cohabiters by household position

Current household position (1 January 2005; N=289,248)	%	Former household position (1 January 2004; N=269,130[4])	%
partner in unmarried couple without children	64.5	living in parental home	30.8
partner in married couple without children	13.4	living alone	48.0
partner in unmarried couple with children	14.8	partner in (un)married couple	8.0
partner in married couple with children	7.3	single parent	8.7
		other household member	4.0
		person in institutional household	0.5
Total	100.0	Total	100.0

[4] The number of household positions on 1 January 2004 is smaller compared to the number on 1 January 2005 due to missing household positions caused by people living abroad on 1 January 2004.

The cohabiters that were living with another partner one year before cohabitation (7 percent) were mostly unmarried without children. Those who live in institutional households prior to cohabitation (such as long-term residents of children's homes, prisons, nursing homes and rehabilitation centres) are either very young (below 20) or 65 years or older.

2.5.2 Distance between partners

The average distance between Dutch partners before cohabitation is 23 kilometres and half of all new cohabiters find their partner within 6 kilometres (table 4). Very few people live a long distance away from each other just before cohabitation. The distance between current cohabiters decreases over the life course: five years before cohabitation the average distance is 27 kilometres, while at birth, cohabiters lived on average 44 kilometres from each other. One fifth of new cohabiters are born in the same municipality. Spatial homogamy thus increases throughout the life course (figure 2).

Table 4. Distance indicators for new cohabiters

	distance just before cohabitation	distance 5 years before cohabitation	birthplace distance
mean	22.7 km	27.1 km	44.3 km
95% confidence interval	22.6-22.9 km	26.9-27.2 km	44.1-44.5 km
median	6.2 km	7.8 km	22.9 km
maximum	366 km	298 km	308 km
N	248,721	240,032	212,510

Distance decay in partner choice is obvious in figure 3. A distance of one kilometre between partners before cohabitation is the most common distance among new cohabiters in the Netherlands: more than 13 percent of all couples live one kilometre away from each other before cohabitation. The second most common distance before cohabitation is (approximately) 250 metres. Thus, most partners are found at very short distances; very few people find their partner beyond 10 kilometres.

Figure 2. Distance between new cohabiters just before cohabitation, five years before cohabitation and at birth, in kilometres

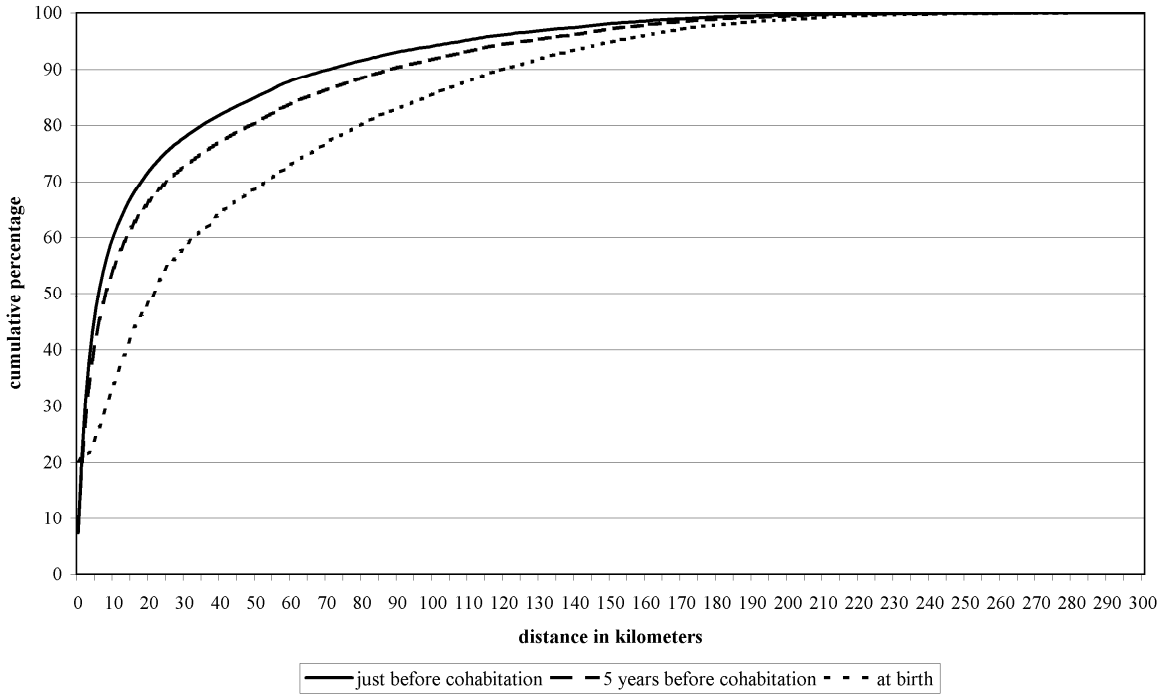
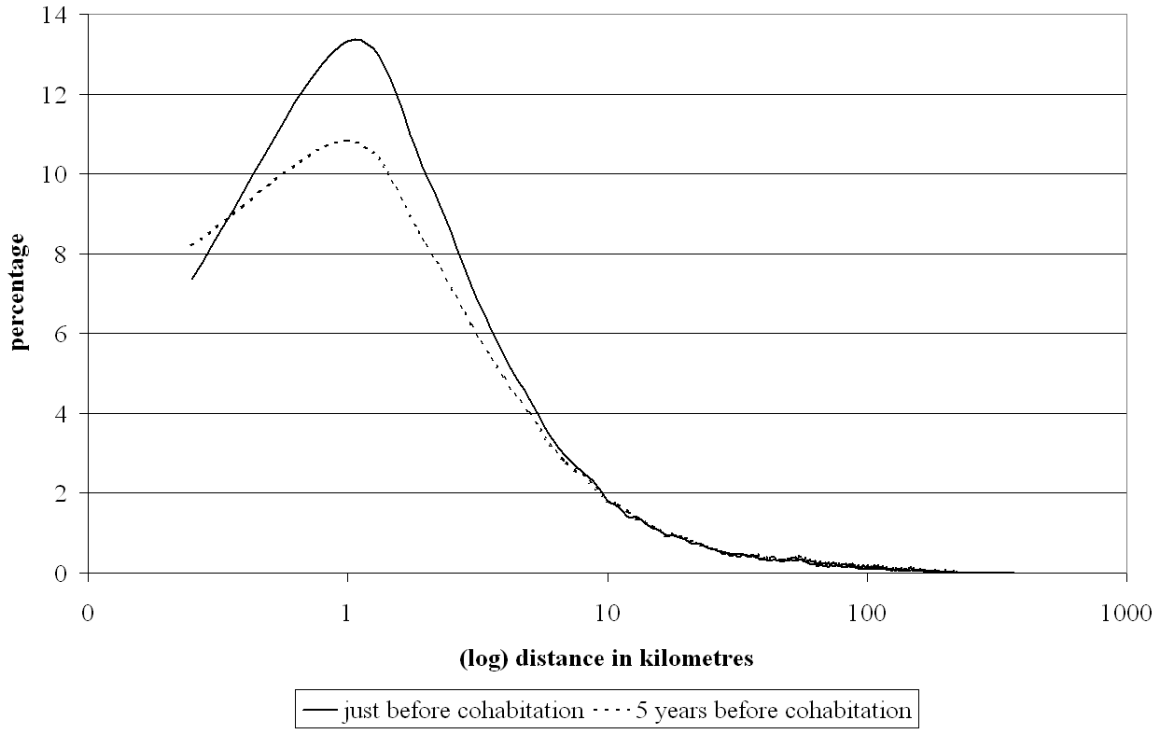


Figure 3. Distance decay: distance between partners before cohabitation



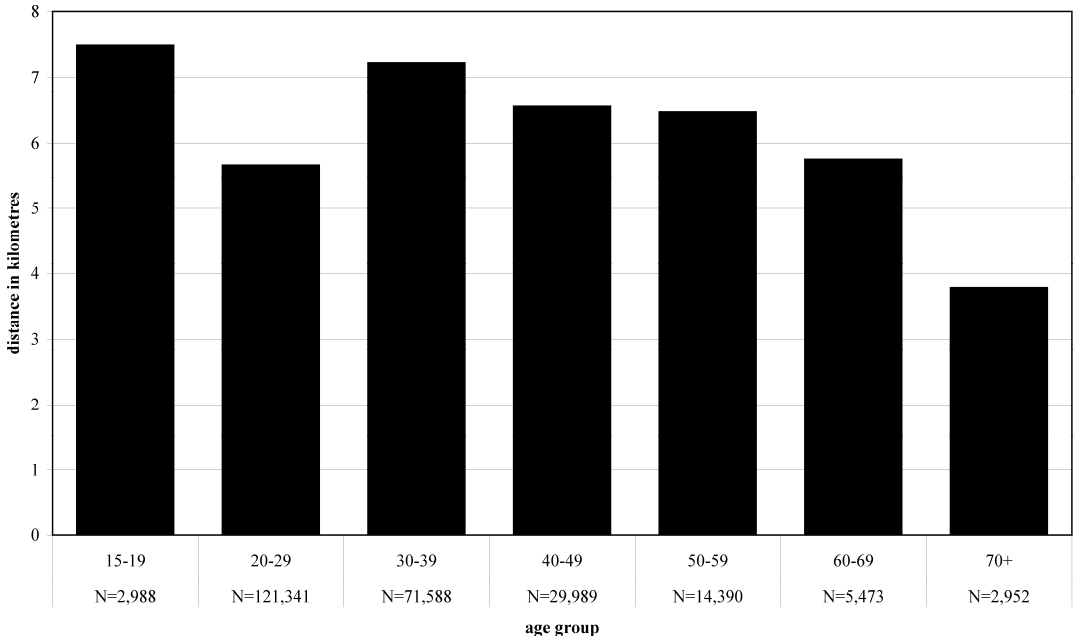
As the frequency distribution of the distance between partners is extremely skewed, the population median is a more meaningful measure of centrality than

the mean. Therefore, in the remaining analysis, the median is used in examining the demographic and spatial dimensions of spatial homogamy. Following Bonett and Price (2002), confidence intervals for simultaneous pairwise comparisons of distance medians are used to test hypotheses[5].

2.5.3 The demographic dimension of spatial homogamy

The variation in spatial homogamy is explored by examining the demographic dimension. Figure 4 shows the median distances between partners before cohabitation by age, and table 5 shows all pairwise comparisons of age groups based on confidence intervals of medians.

Figure 4. Median distance between partners before cohabitation, by age group



There is a clear age trend in spatial homogamy, and most differences between age groups are significant. Median distances between partners are highest at younger ages (median distance of 7.5 kilometres for those aged below 20 years), and

[5] We follow Bonett and Price (2002)'s procedure to estimate confidence intervals for a linear function of medians. Simultaneous pairwise comparisons of distance medians are conducted to test whether one or more groups differ significantly. The linear function of medians is defined as $c_1\eta_1 + c_2 n_2 + ... + c_k n_k$ where c is a number specified by the researcher, $\sum c_j = 0$ and η_j is the population median. Confidence intervals are calculated using distribution-free estimates of the variance of the median. The 95% confidence interval for $\sum c_j \eta_j$ is calculated as $\sum c_j \hat{\eta}_j \pm z_{\alpha/2} \left(\sum c_j^{\,2} \operatorname{var} \hat{\eta}_j\right)^{1/2}$, where var_{η_j} is a distribution-free estimate of the variance of η_j and $z_{\alpha/2}$ is a two-tailed critical z-value. The variance of η_j is defined as $var\ \hat{\eta}_j = \left[\left(Y_{(n_j - a_j + 1)j} - Y_{(a_j)j}\right)/2z_j\right]^2$ where $a_j = \left(n_j + 1\right)/2 - \sqrt{n_j}$ and is rounded to the nearest nonzero integer; $Y_{(a_j)j}$ is the a^{th} largest score of group j, and z_j is extracted from Table 1 in Bonett and Price (2002).

distances decrease with increasing age, with an exception for the 20-29 age group, where partners are chosen at significantly shorter distances than all other age groups (except the 60-69 group). The median distance between partners above 70 years of age (almost 3,000 partners) is significantly lower (median of 3.8 kilometres) than all other age groups.

Table 5. Medians and confidence intervals of simultaneous pairwise compared age groups*

	15-19	20-29	30-39	40-49	50-59	60-69	70+
15-19	7.5 km	*				*	*
20-29		5.7 km	*	*	*		*
30-39			7.2 km	*	*	*	*
40-49				6.6 km		*	*
50-59					6.5 km		*
60-69						5.7 km	*
70+							3.8 km

Note: The diagonal displays the median per age group in kilometres. The asterisks indicate whether the two age groups concerned differ significantly.

As the age range of new cohabiters is quite broad and most cohabiters are aged below 40 years, the remainder of the analysis focuses on this particular group.

Figure 5. Median distance between partners before cohabitation, cohabiters younger than 40 years, by former household position

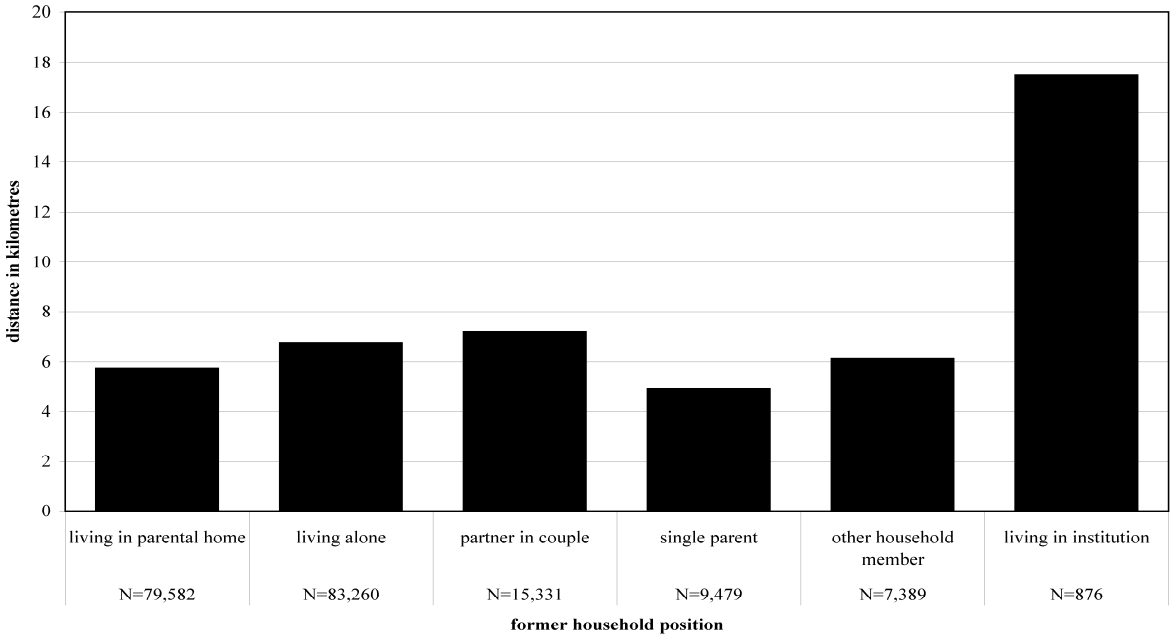
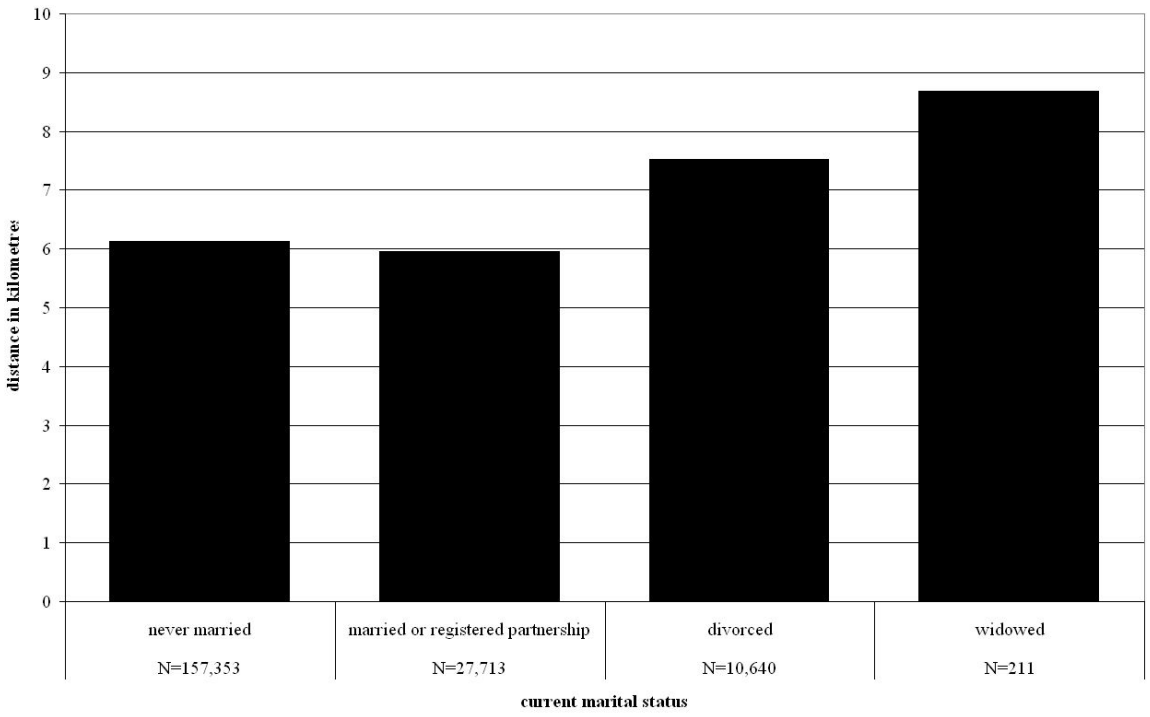


Table 6. Medians and confidence intervals of simultaneous pairwise compared household positions*

	living in parental home	living alone	partner in couple	single parent	other household member	living in institution
living in parental home	5.8 km	*	*	*		*
living alone		6.8 km		*	*	*
partner in couple			7.2 km	*	*	*
single parent				4.9 km	*	*
other household member					6.1 km	*
living in institution						17.5 km

Note: The diagonal displays the median per former household position in kilometres. The asterisks indicate whether the two household positions concerned differ significantly.

Figure 6. Median distance between partners before cohabitation, cohabiters younger than 40 years, by current marital status



Spatial homogamy also varies with household position before cohabitation. Figure 5 shows the median distances between partners according to former household position, while table 6 shows the accompanying confidence intervals. Distances differ significantly between household positions. Single parents and those living

with their parents before cohabitation have significantly shorter distances before cohabitation, while people who lived alone or lived with another partner find their partner significantly further away. Current cohabiters who previously lived in institutional households have the longest distances to their partners (median distance of 17.5 kilometres), probably caused by the location of those institutions.

Table 7. Medians and confidence intervals of simultaneous pairwise compared marital statuses*

	never married	married or registered partnership	divorced	widowed
never married	6.1 km		*	
married or registered partnership		6.0 km	*	
divorced			7.5 km	
widowed				8.7 km

Note: The diagonal displays the median per current marital status in kilometres. The asterisks indicate whether the two marital statuses concerned differ significantly.

The third demographic dimension is the variation in spatial homogamy according to current marital status. Figure 6 and table 7 show the median distance between partners by marital status, including confidence intervals. Only those who are divorced before cohabitation significantly differ from other marital statuses: divorced persons choose partners at significantly longer distances compared to married and never married persons.

2.5.4 The spatial dimension of spatial homogamy

Spatial variation is the other core dimension of spatial homogamy investigated in this study. Figure 7 and table 8 show the median distance between partners before cohabitation according to different levels of urbanisation, including confidence intervals. The degree of urbanisation is based on address density[6] of the postal code area of the residential address before cohabitation. With increasing level of urbanisation, the distance between partners decreases. In other words, spatial

[6] The degree of urbanisation is based on the so-called 'surrounding address density', which is the number of addresses around an address within a radius of one kilometre, and is calculated for each 500 by 500 metre square according to the national triangulation system (RD system). For each 6-digit postal code area, the average surrounding address density for each 500 by 500 metre square is calculated and weighted by the number of addresses for each square. The following classes are used, based on the classification by Statistics Netherlands: not urbanised (<500 addresses per km^2), hardly urbanised (500-1000), moderately urbanised (1000-1500), highly urbanised (1500-2500), and extremely urbanised (>2500 addresses per km^2).

homogamy increases with increasing urbanisation. All differences between the five levels of urbanisation are significant.

Figure 7. Median distance between partners before cohabitation, cohabiters younger than 40 years, by degree of urbanisation of former address

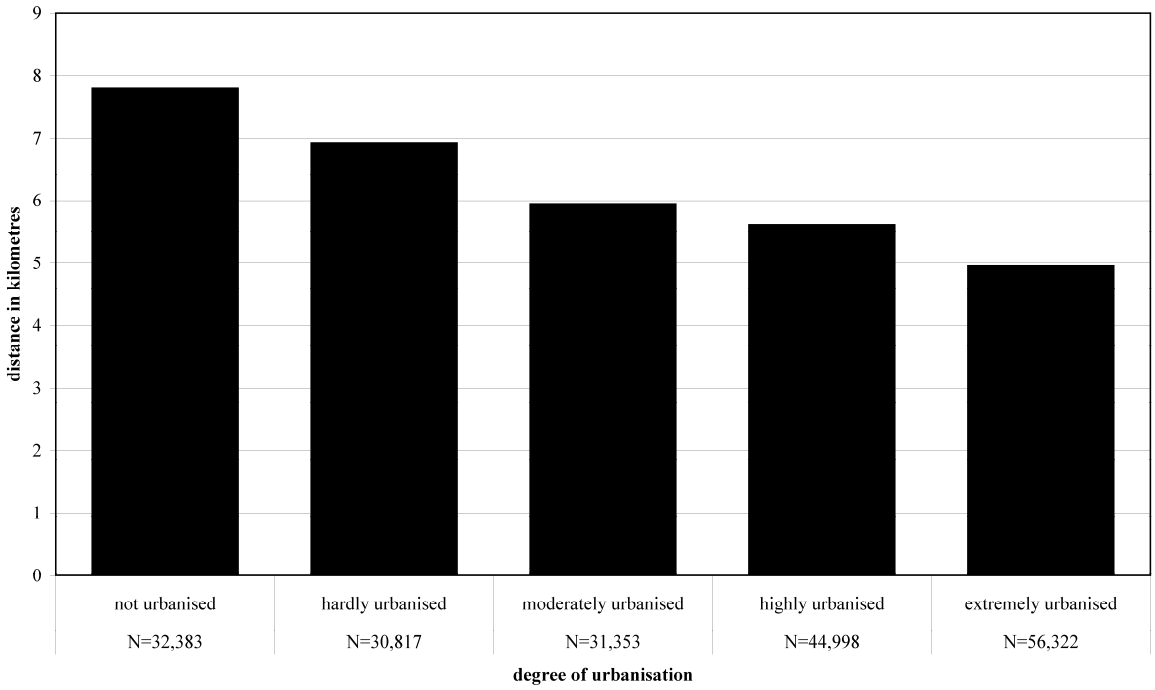


Table 8. Medians and confidence intervals of simultaneous pairwise compared degrees of urbanisation*

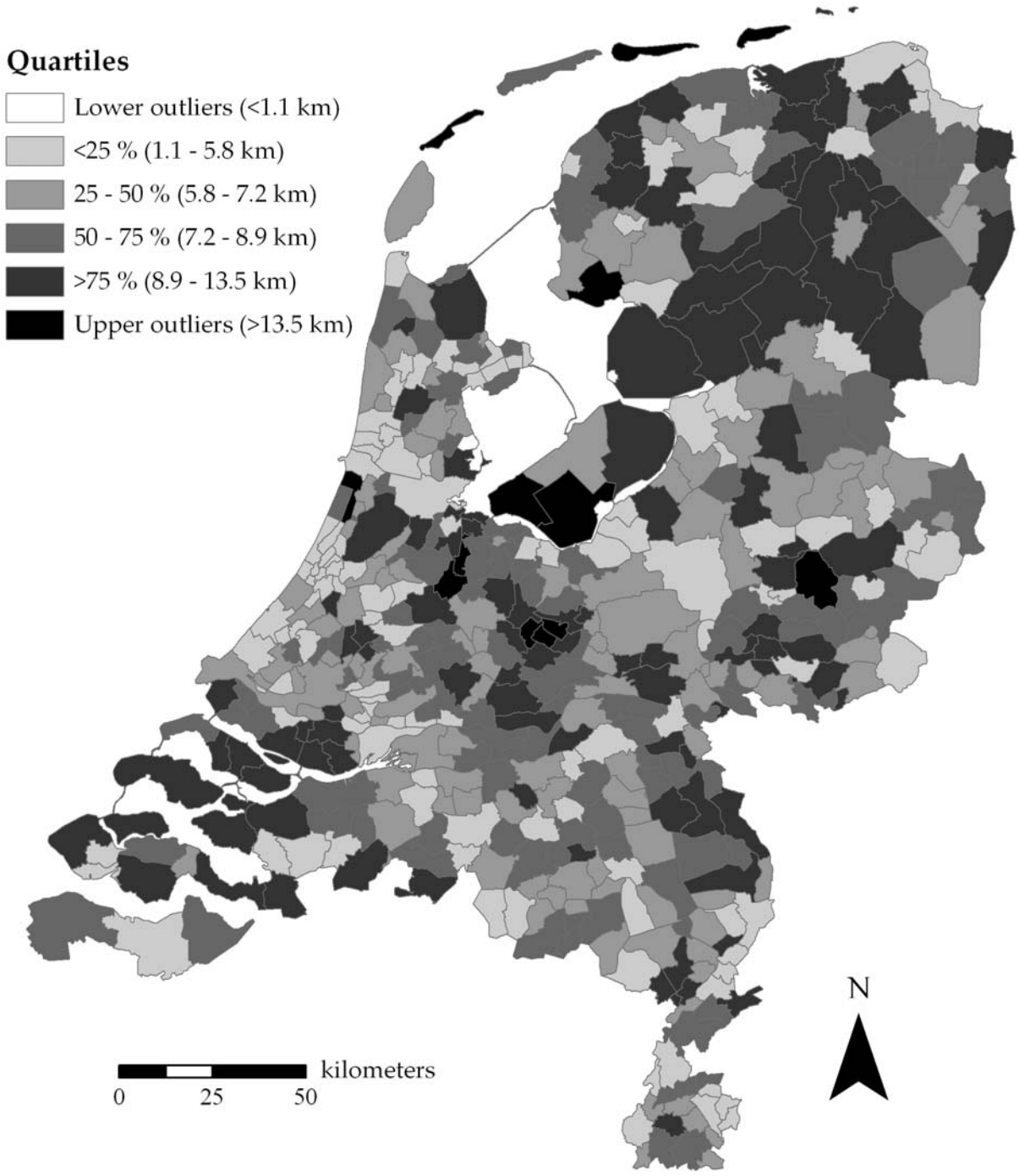
	not urbanised	hardly urbanised	moderately urbanised	highly urbanised	extremely urbanised
not urbanised	7.8 km	*	*	*	*
hardly urbanised		6.9 km	*	*	*
moderately urbanised			5.9 km	*	*
highly urbanised				5.6 km	*
extremely urbanised					5.0 km

Note: The diagonal displays the median per degree of urbanisation of former municipality of residence in kilometres. The asterisks indicate whether the two degrees of urbanisation concerned differ significantly.

Figure 8 shows median distances between partners before cohabitation for the 483 municipalities of the Netherlands in 2004. Upper outliers, or areas of high spatial heterogamy, are found in the peripheral north (including the Wadden Islands) and

south west, and in the central part of the country (Flevoland and a cluster of municipalities in the area between Amsterdam, Utrecht and Tiel).

Figure 8. Median distance between new cohabiters before cohabitation, cohabiters younger than 40 years, by former municipality of residence



Lower outliers, or areas where people choose partners that are highly spatially homogamous, are the municipalities of Urk, where half of all new cohabiters find partners within 800 metres, and Edam-Volendam where the median is one kilometre. Urk, a fisherman's village and a former island (part of the province of Flevoland), is known for its closed community, orthodox protestant churches, and its deviating dialect. The village of Volendam, also a fisherman's village, in the municipality Edam-Volendam is a catholic enclave in a protestant area, also known for its particular dialect. Other areas where spatially homogamous partners are chosen are found in other protestant strongholds such as Bunschoten (Spakenburg), Kampen, Rijnsburg and Rijssen-Holten. Furthermore, distances between partners are relatively short in and around bigger and middle-sized cities, and in some areas in the south of Limburg, Noord Holland and the north of Groningen and Friesland.

2.5.5 Spatial homogamy coefficient

From the geographical variation in median distances between partners, we deduce that spatial heterogamy is higher in low density areas and on islands and other more remote areas. One important reason for this result is that the average distance to any other person in the Netherlands is also larger than in the core and densely populated regions. Therefore, we should standardise the distance between partners for *the average distance to all other inhabitants in the Netherlands*. This is done as follows. First, for a person living in municipality i we calculate the distance to all other persons in the Netherlands. For practical purposes this is approximated by aggregating to the municipality level. Let d_{ij} be the distance between the geometric centres of municipality i and j. Then the average distance for any person living in i to another person in the Netherlands is approximated by:

$$\bar{d}_i = \frac{1}{N}\sum_j d_{ij} P_j$$

where P_j is the population size of municipality j and N is the population of the Netherlands. As distances to partners within the same municipality are not zero, these distances are approximated by:

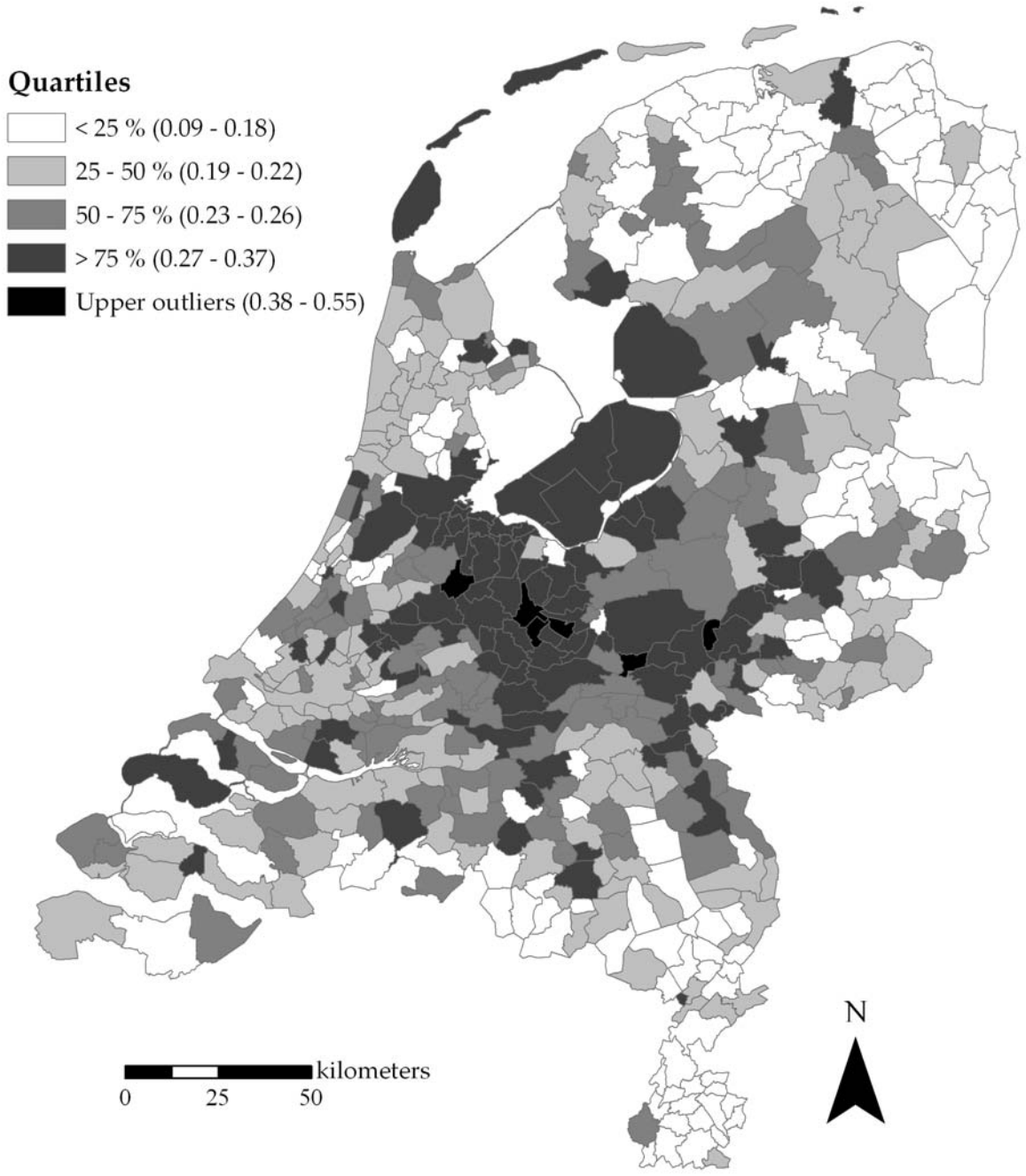
$$d_{ii} = \tfrac{2}{3}\sqrt{\frac{area_i}{\pi}}$$

where $area_i$ is the area of municipality i in square metres on 1 January 2004. The underlying assumption of this formula is that the population is uniformly distributed within the municipality and that the form is a circle.

Next, let $\bar{s}_i$ be the average distance to cohabitation partners of all those who started cohabiting in 2004 and who were living in municipality *i* on January 1, 2004. The spatial homogamy coefficient for municipality *i* is calculated as:

$$SHC_i = \frac{\bar{s}_i}{\bar{d}_i}$$

Figure 9. Spatial homogamy coefficient



A value of 0.5 of this coefficient means that for a person in municipality *i* the average distance to his or her partner before cohabitation is half that of the average distance to the average person in the Netherlands.

Figure 9 shows the map of each municipality's spatial homogamy coefficient. The average spatial homogamy coefficient for the whole of the Netherlands is 0.23, as the average distance between cohabiters is 23 kilometres and the average distance to all other inhabitants is 102 kilometres. Thus, the average distance to cohabitation partners is about a quarter of the average distance to other inhabitants, indicating the very local dimension of partner choice. The coefficient ranges from 0.09 to 0.54. Municipalities with a high spatial homogamy coefficient are municipalities which have a longer distance between partners compared to the expectation on the basis of their geographic location and number of inhabitants; municipalities with a low score on the spatial homogamy coefficient are municipalities which have a shorter distance than one would expect if geographic location and population were the only determinants of spatial homogamy.

The application of the spatial homogamy coefficient shows that the long distances between partners found in the northern provinces and the south west are due to their peripheral position and low population density, and that conditional on these geographical factors, partner choice in these regions is not different from other regions. Actually, several northern and southern areas have a relatively low spatial homogamy coefficient, implying much lower distances between partners than expected on the basis of geographic location. Other areas with low coefficients are Urk, Rijnsburg and Edam-Volendam and the east of Overijssel. In contrast, high coefficients are found in the central part of the country.

2.6 Summary and discussion

Geography does matter. This study has shown that distance decay is highly relevant in partner choice, as Dutch people choose spatially homogamous partners. Half of all new cohabiters live within a distance of six kilometres of each other before cohabitation, while the most common distance between partners is one kilometre. As the chance of meeting a partner is greater at close distance and since bridging distance (still) involves time, energy and costs, partners are found close by.

Spatial homogamy varies with stage in the life course. First, a clear age trend is apparent, with younger couples finding their partner at relatively long distances and decreasing distances between partners as age increases, with an exception to the trend of partners in their twenties, who find their partner relatively close by. The long distances at younger ages are in line with studies by Coleman and

Haskey (1986) and Clegg et al. (1998), who found that marital distances decrease with increasing age. Second, household position before cohabitation affects the extent of spatial homogamy. Those living in the parental home before cohabitation lived significantly closer to their future cohabitation partner compared to most other household positions. This suggests that the geographical horizon of those living with their parents is relatively narrow. This finding seems to be contradictory to the finding that young people have significantly higher distances to partners, as most people under the age of 20 are living with their parents. However, the majority of people living with their parents before cohabitation is over 25. A possible explanation for the long distances of the age group 15-19 is that a share of these young cohabiters leaves the parental home in order to pursue higher education, and start cohabitation soon after having lived alone or with others for a while. As distances are compared for the addresses on January 1 of two consecutive years, people may have changed household positions more than once. In addition, since a high share of household positions of 15-19 year-olds are imputed, distances between partners for this group may be biased if part of the 15-19 year group is actually not cohabitating but is living with other people. The imputed allocation of household position might be more often incorrect in this age group.

The relatively short distances between cohabiters who are in their twenties could be related to the availability of spatially close partners. At earlier ages, sufficient potential partners are available at close distance, leading to spatially homogamous couples. Consequently, those who start living together in their thirties have to search for partners in a wider geographical area. In addition, with increasing age the radius of action may also increase due to increased mobility and therefore expanding work and friendship networks. The geographical horizons of elderly people are small: beyond age 60, distances between partners decrease considerably. In historical studies, decreasing marital distance with increasing age has been associated with low affluence (e.g. Clegg et al. 1998). In present-day societies, it seems more likely that the lower distances between partners at higher ages are related to a shrinking spatial pattern of activities. The long distances for persons in institutional households may be explained by the geography of rehabilitation centres, prisons and other institutions. Moreover, if these persons return to their partner after a substantial time apart from each other, they may have been wrongly imputed as being new cohabiters.

Spatial homogamy linearly increases with degree of urbanisation. Although people living in highly urbanised areas may have wider geographical networks (Blau 1977), this is not reflected in the distances at which partners are found. The short distances in urbanised areas may be explained by the sufficient number of potential marriage partners within city borders. Furthermore, different degrees of

spatial homogamy within urban or regional areas may reflect different degrees of social cohesion.

Spatial homogamy exhibits a distinct spatial pattern, with extremely long distances between partners in the central Netherlands, and in peripheral areas such as the north and the south west. This study adds to the existing body of research on spatial homogamy (Coleman 1979; Coleman and Haskey 1986; Van Poppel and Ekamper 2005), that the long distances between partners in rural and peripheral areas are induced by population size and geographic location. This is concluded from applying the *spatial homogamy coefficient*. This coefficient is a methodological novelty in analyzing geographical differences in spatial homogamy, and may be applied to any type of behaviour that is governed by interaction, such as migration or commuter behaviour. As geographic location and population size heavily influence interaction between people, using the spatial homogamy coefficient separates geographic from other effects.

A disadvantage of the coefficient might be that the results for central locations can be somewhat biased, as partners are 'expected' to be found at (too) close distance since the average distance to all other Dutch people is relatively short at these places. Therefore, the values of the spatial homogamy coefficient for the centre part of the country might be too high.

The spatial patterns of spatial homogamy and the spatial homogamy coefficient show that areas with short distances between partners are found in urban areas, but also in the north and south. This is unexpected, given that the peripheral location and low population density of these areas are generally associated with longer distances. The explorative spatial data analysis in this paper has suggested potentially interesting dimensions in spatial homogamy. Specifically, the role of cultural factors such as religion, dialect and the extent to which communities are closed appears to be important in the explanation of spatial homogamy, as suggested earlier. Some regions seem to have preserved or even strengthened their regional identity, although small societies have increasingly integrated into larger structures, indicated by a decreasing proportion of couples in which both partners were living in the same region when they met (Knippenberg and De Pater 1988). Religion surely seems to serve as a predictor of spatial differences in partner choice, as short distances between partners are found in the Bible belt, thereby adding to Sobotka and Adigüzel (2002). As patterns of partner choice reveal something about cultural and social groups and borders in a society, they have been associated with openness. An increase in mixed marriages in terms of geographic origin decreases the internal cohesion within groups and decreases cultural and social distance in society. In the last two centuries, economic, social and cultural changes such as the growth in education, the in-

crease in social and geographical mobility, and the expansion of the welfare state have changed personal relationships (Beekink et al. 1998). These changes have widened the autonomy of individuals and have decreased the effectiveness of sanctions on social norms, enabling the widening horizon of the partner market. As a reverse development, some tight social communities limit the geographical range of their social and economic activities, and mainly choose partners from within the region. In this way, the regional identity of such areas is strengthened further.

The remaining geographic variation in spatial homogamy should be further examined. Therefore, in a subsequent study the role of demographic, socio-economic, cultural and pure spatial factors in spatial patterns of spatial homogamy will be investigated using spatial regression techniques. In such models, the clustering of socio-economic and cultural groups can be taken into account.

In this study, spatial homogamy was measured as the distance between former addresses of new cohabiters at two points in time. Although these addresses indicate where people were living before they started living together, they may not be the exact places were partners met. For that reason, further research will also focus on the geography of meeting places.

When it comes to matters of the heart, geography is highly pertinent. Spatial homogamy is strongest for those who start living together in their twenties and those who start cohabitation at old ages. Moreover, single parents and those living with their parents find their partner relatively close by. Spatial homogamy varies geographically, although extremely long distances in peripheral locations are mainly due to geographic factors. Partners are found at increasingly shorter distances as urbanisation increases. It is plausible that our findings (especially the demographic and spatial variations in spatial homogamy) apply to other populations as well. In countries where the urban-rural divide is larger than in the densely population Netherlands, differences might even be larger. Obviously, local cultural circumstances differ across countries, and therefore regional differences in spatial homogamy will differ according to local cultural settings.

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3 EXPLAINING SPATIAL HOMOGAMY. COMPOSITIONAL, SPATIAL AND REGIONAL CULTURAL DETERMINANTS OF REGIONAL PATTERNS OF SPATIAL HOMOGAMY IN THE NETHERLANDS[1]

ABSTRACT

Spatial homogamy, or sharing a similarity in geographical origin, is an under-researched dimension in homogamy studies. In the Netherlands, people tend to choose spatially homogamous partners. Moreover, there is considerable regional variation in spatial homogamy, even when residential location and population density are controlled for. This study aims to explain the regional variation in spatial homogamy by means of a spatial regression. Three sets of explanations are taken into account: compositional effects, spatial determinants, and regional cultural differences. The data used consists of a unique geo-coded micro dataset on all new cohabiters in the Netherlands in 2004 (N=289,248), combined with other data from varying sources. In the spatial regression, the dependent variable is the standardized distance coefficient, based on the distance between partners before cohabitation, standardised for the average distance to other inhabitants. We find that especially educational, income and cultural differences contribute to the regional variation in spatial homogamy.

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3.1 Introduction

Studies on assortative mating have found that around the world, individuals tend to look for a partner with similar characteristics. Homogamy, or the similarity between married or cohabitating partners, has mostly been studied from a sociological perspective; similarity in these studies is defined in terms of social class, education, religion, or ethnic background. Implicit in many of these studies is the notion that potential partners are also co-located in space: they tend to live close by. Spatial homogamy, or shared similarity in geographical background, is the topic of the present study.

In a recent study, new cohabiters in the Netherlands were found to choose spatially homogamous partners (Haandrikman et al. 2008a). The explorative study found considerable regional variation in spatial homogamy. This article aims to explain the regional variation in spatial homogamy by means of a spatial regression. Three sets of explanations are taken into account. First, based on the literature on marital distances, compositional factors that have been found to affect spatial homogamy - most importantly demographic and socio-economic status attributes - are considered. Second, specific spatial determinants are examined so as to account for the variation in spatial homogamy. Third, regional cultural differences, particularly variation in religion, language and value orientations, may be related to regional differences in marital distances.

Recent developments in the compilation and linkage of large micro-level datasets have enabled us to conduct a large-scale study on spatial homogamy in the Netherlands. As we are interested in the spatial dimension, we aggregated micro data of all new cohabiters in 2004, taken from the population register, and linked these to geographic coordinates for each separate household address, in order to make a regional comparison. The dependent variable that was used is a so-called standardized distance coefficient, which corrects the average distance to partners to the average distance to all other Dutchmen. Subsequently, explanatory variables were derived from different sources. Besides using annual regional statistics from Statistics Netherlands and regional cultural indicators, micro-level data on educational enrolment was linked to all cohabiters, out of which regional indicators were constructed. Exploratory spatial data analysis was used to analyse the dependent and independent variables using GeoDa, and spatial regression techniques were applied to explain regional patterns of spatial homogamy.

3.2 The spatial dimension of partner choice: background and expectations

The spatial dimension is a relatively unexplored dimension of homogamy. In the United States in the 1940s and 50s, so-called propinquity studies were conducted, in which the proximity of bride and groom before marriage was examined (e.g.

Bossard 1932; Davie and Reeves 1939; Ellsworth 1948; Koller 1948). Most studies found that the number of marriages declines as the distance between potential spouses increases. For example, Bossard (1932) found that one-third of all married couples lived within five blocks from each other before marriage. Van Poppel and Ekamper (2005) provide an overview of different historical studies that prove the existence of geographical endogamy in the Netherlands. However, most studies are outdated, based on historical data, and usually restricted to cities or regions. A recent study (Haandrikman et al. 2008a) showed that Dutch people choose spatially homogamous partners: half of all new cohabiters find their partner within a 6-kilometre distance.

Geographical distance influences partner choice in four ways, as described by Haandrikman et al. (2008a). Proximity increases the likelihood of spontaneous encounters, and therefore distance decay is highly pertinent in partner choice. Second, notwithstanding increases in mobility, educational enrolment and leisure time, bridging distance (still) involves time, energy and costs, and therefore partner choice still occurs at a local scale. Thirdly, physical barriers, population density and degree of urbanisation influence the access to potential partners and therefore impact meeting opportunities. Living in peripheral areas leads to average longer travel distances to partners given the accessibility to potential partners, which is further limited by spatial barriers such as water masses and mountain ranges. Fourth, the spatial pattern of potential candidates with certain characteristics influences partner choice. Geographical clustering of religion, dialect or other cultural assets, but also of socio-economic attributes may imply cultural proximity, leading to the preference of a spatially homogamous partner. The preference for a partner with the same cultural qualities stimulates the choice of a partner from the same or a culturally related region, since people in the same or related regions share the same language and are assumed to share the same ideas concerning partnerships, family, and religion (Van Poppel and Ekamper 2005).

Regional variation in spatial homogamy results from different processes. The following paragraphs describe these explanatory processes and discuss the expectations for the current study.

First, from the literature on marital distances, several *compositional factors* have been found to affect spatial homogamy, most importantly demographic and socio-economic status attributes. Spatial clustering of people with the same characteristics, which is very common (e.g. Goode 1982; Winch 1971), may lead to patterns of regionally differentiated behaviour. As age homogamy is more common than age heterogamy (for instance De Graaf et al. 2003; Van Poppel et al. 2001), the availability of potential partners in certain age groups affects meeting

and mating opportunities. The most extreme case is the so-called 'marriage squeeze', where men or women are confronted by a shortage of partners their age because of variations in birth numbers (Ni Bhrolcháin 2001). Another compositional effect found to affect spatial homogamy patterns is socio-economic status. Higher social classes are generally associated with longer distances between marriage partners (e.g. Clegg et al. 1998; Coleman and Haskey 1986; Haandrikman et al. 2008b; Küchemann et al. 1974; Van Poppel and Ekamper 2005). A combination of preferences, strong norms to marry within the class, and geographically extensive opportunities to meet partners might lead to greater distances. For the UK, Fielding (1992) found that higher education led to widening horizons of the middle class: these groups tend to find partners in other regions. Perhaps this is also related to the fact that education is a strong proxy for cultural lifestyle (Hendrickx 1998). Especially in the past, the lower social classes were more often locally oriented, partly due to limited (travelling) means. People of similar socio-economic status tend to cluster in space (Winch 1971), which probably leads to regional differences in marital distances between different socio-economic groups.

Second, regional variation in spatial homogamy may also be explained by specific *spatial determinants*. In urban areas, partners may be found at shorter distances, since high concentrations of people, jobs and educational opportunities increase meeting opportunities. In peripheral areas on the other hand, a fewer number of potential candidates in near proximity might lead to greater mean distances.

Third, regional differences in nuptiality have in the past been found to be related to cultural factors: regions with similar cultural characteristics showed similar patterns of marriage, even after controlling for the level of modernisation (Coale and Watkins 1986). *Regional cultural differences* in religion, language and value orientations are among the most studied and important variables in this regard. The geography of religion in the Netherlands has been surprisingly stable over the centuries. The south is predominantly Catholic, while the northern part is a mixed zone of liberal Protestants and non-denominationalists. Buffered between the two zones is a strip of towns and villages stretching from the southwest to the north known as the Bible belt (e.g. Knippenberg 2005). A large proportion of the people living in the Bible belt are orthodox Calvinists, who are characterised by rather traditional demographic behaviour as compared to the rest of the country. This group holds more traditional views on marriage and their fertility is relatively high. Dutch people tend to marry within their religious group; the level of endogamy differs per denomination (Hendrickx 1994). Especially Protestant denominations are more endogamous than the more liberal denominations. While

religious endogamy of Catholics and re-reformed Protestants has declined since the 1930s, an upheaval was experienced in the 1980s (Hendrickx 1998). Religion was found to have a strong influence on marital distances for the first half of the twentieth century in the Netherlands (Polman 1951). Nowadays, religion still serves as a strong predictor of spatial demographic differences in the Netherlands (Sobotka and Adigüzel 2002). In spite of the ongoing secularisation, some more orthodox denominations still have a marked influence on demographic behaviour, through the shaping of attitudes concerning family matters. A recent study by Haandrikman et al. (2008a) revealed particularly high spatial homogamy in the Bible belt.

Table 1. Characteristics of dimensions of regional culture[2]

Dimension of regional culture	High score	Low score
Post-materialism	focus on self-development / self-expression co-operative and egalitarian (very) small households many votes for progressive parties environmentally conscious	focus on material well-being competitive and authoritarian large households many votes for conservative parties
Classic individualism	individual is more important postponement of marriage and childbearing many votes for liberal parties	national or collective interests more important relatively early marriage and childbearing
Protestant conservatism	predominantly Protestant early marriage and childbearing traditional / large households and families male dominance	predominantly Catholic little early marriage and childbearing

Language is another key component of culture and therefore a major element of regional cultural differences. Linguistic differences are broad cultural borders, which may create linguistic groups in society (e.g. Van Langevelde 1999). Speaking a dialect or regional language may lead people to prefer partners from the same language group, as was found in the US (Stevens and Schoen 1988). Language then acts as a factor increasing cultural proximity. In the Netherlands,

[2] Adapted from Brons (2006), p. 562.

there are three officially recognised regional languages (as proclaimed by the European Charter for Regional or Minority Languages) besides standard Dutch, namely Frisian, Low Saxon, and Limburgish. Regional language speakers are geographically clustered; the dialect map of Daan and Blok (1969) that identified 28 geographically clustered dialect groups on the basis of the perception of dialect speakers is well known. Heeringa (2004) has shown that the three languages are spoken in areas with significant borders around them, as measured by dialect distances.

Table 2. Hypotheses

Compositional effects	
1	A shortage of partners in the desired age group leads to increased distances between partners.
2	In areas with a higher level of socio-economic status, the distance to partners is greater.
Spatial determinants	
3	The more urban the area, the shorter the distance to partners in that area.
Regional cultural differences	
4	In the Bible belt area, distances between partners are shorter.
5	In areas where regional languages are spoken, distances between partners are shorter.
6	With increasing levels of modernisation, the distance between partners increases.

Differences in value orientations may also lead to different patterns of spatial homogamy, as demographic behaviour has been found to be influenced by value changes (e.g. Van de Kaa 2001). With increasing urbanisation, the probability of wider social circles increases (Blau 1977). As a consequence of the 'urban culture', living in urban areas may nurture new value orientations and open-mindedness, leading to larger networks of friends and acquaintances and increasing opportunities to meet partners in a greater range of meeting places, distributed in a greater area, thus widening the distance to partners. For the Netherlands, Brons (2006) studied dimensions of regional culture and found considerable regional variation in value orientations. His measurement of value orientations is derived from indirect measures of demographic behaviour, religious adherence, and voting behaviour, and it is based on Hofstede's (1980; 1991) measurement of national cultures. For our study, three dimensions identified by Brons (2006) are pertinent: post-materialism, classic individualism and Protestant conservatism (see table 1). These dimensions of regional culture are expected to have an impact

on spatial homogamy. High scores on *post-materialism* and *classic individualism* are related to modernisation, as they indicate an increased focus on self-development, little religious influence, and decreased focus on traditional households and families. With increasing modernisation, the geographical horizon of individuals has been found to increase (Beekink et al. 1998), as well as contacts between different groups in society (Hendrickx 1994). As changing geographical horizons are related to changing value orientations, Brons's (2006) indices seem to be useful indicators for regional cultural differences that might account for part of the regional variation in spatial homogamy. The dimension *Protestant conservatism* represents conservative cultures, with high levels of male dominance and uncertainty avoidance. Given the resemblance to characteristics of Bible belt inhabitants, high scores on Protestant conservatism may be related to shorter distances to partners.

Table 2 summarizes the hypotheses.

3.3 Data and method

In this section, the data sources used in this study are discussed, followed by a description of the dependent variable, the operationalisation of explanatory variables, and the methodology of the spatial data analysis.

3.3.1 Data sources

Spatial homogamy is often examined by analysing distances between partners before marriage. In the current Dutch context, most couples either cohabit as a prelude to marriage, or cohabit as a substitute to marriage (Manting 1994). Therefore, the geographical similarity of partners in unions is examined for couples that start living together, irrespective of whether they are married or not. Geographic similarity is measured before cohabitation. For that reason, a geocoded micro-level database on cohabitation was constructed, based on register data. The Dutch population register, the so-called 'Gemeentelijke Basisadministratie' (GBA), is a decentralised automated population registration system, managed by the different municipalities. The register stores information on each registered inhabitant of the country, such as information on the person, parents, marriage, registered partnership, offspring, and address. As moving house or change in address is reported in the GBA, migration histories can be constructed. Individuals can be linked, through using personal identification numbers, to spouses, children, and parents. The municipal population registers are assessed to be of outstanding quality (Prins 2000). As we are interested in new cohabiters, those individuals who started living together with a partner in the year 2004 were selected. Since marriages and registered partnerships are recorded by

the local registrar, these events are directly documented in the GBA. Unmarried cohabiters were identified by using household statistics which are annual statistics constructed by linking the personal lists of persons living at the same address. Statistics Netherlands use a set of rules to derive household positions, based on the relationships to the reference person, marital status, children if any, and an imputation model to determine the remaining group. If two people moved to the same address at the same date, they are classified as a single household. The imputation model is used to determine whether the remaining persons who live at the same address, form a single household. This logistic regression model, described in Israëls and Harmsen (1999) and Harmsen and Israëls (2003), is based on findings from the Labour Force Survey about relations between background variables and the probability of forming a two-person household. To locate new cohabiters, i.e. couples who start living together at the same address, those who experienced a transition in household position, from any other position on January 1, 2004 to being a partner in a couple (with or without children) on January 1, 2005, were selected[3]. The partners were matched to each other based on current address. The resulting dataset for 2004 contains 326,000 individuals (or 163,000 couples).

Subsequently, the (former) addresses of cohabiters were linked to a digital file containing x- and y-coordinates for each known address in the Netherlands, as measured in the national coordinate system. This so-called ACN file (Adrescoördinaten Nederland) uniquely identifies each individual address through the 6-digit postal code and the house number. There are about 7 million addresses identified through ACN coordinates, covering 95 percent of all addresses. Spatial homogamy was operationalised by measuring the distance between former addresses of new cohabiters, and it was calculated by computing the Euclidian distance between the geographic coordinates of these addresses, in metres. For each municipality the average distance between partners was then calculated.

Data on explanatory variables were derived from several sources. First, regional statistics were derived from Regional Core Statistics and the Regional Income Distribution 2004, both from Statistics Netherlands. Second, recent developments in the compilation and linkage of large micro-level datasets have provided us with the ability to match our dataset with another micro-level dataset. Our geo-coded micro data on cohabiters were linked to data from the so-called CRIHO files, in which all persons who studied at an institute of higher education in the Netherlands in the period 1986-2004 are included. The data include

[3] Since the imputation model may lead to overestimation of the number of cohabiting same-sex couples (Steenhof and Harmsen 2003), only heterosexual couples were selected for analysis.

educational information for each year a person was registered at an institute of higher education, and information pertaining to degrees, majors taken, and so on. By matching the CRIHO files with the cohabiters file, we could establish for each cohabiter whether that person ever studied at an institute of higher education. Finally, regional cultural differences were measured by the earlier-mentioned dimensions of core value orientations proposed by Brons (2006).

3.3.2 Dependent variable: the standardized distance coefficient

In a previous study, considerable regional variation in spatial homogamy was found in the Netherlands (Haandrikman et al. 2008a). Moreover, partners living in low density areas and in the periphery were found to have lived further apart. One important factor for this result is that the average distance to any other person in the Netherlands is also greater than in the core and densely populated regions. Therefore, the distance between partners should be standardised for *the average distance to all other inhabitants in the Netherlands*. This is done as follows. Firstly, for a person living in municipality *i* we calculate the distance to all other persons in the Netherlands. For practical purposes this is approximated by aggregating to the municipality level. Let d_{ij} be the distance between the geometric centres of municipality *i* and *j*. Then the average distance for any person living in *i* to another person in the Netherlands is approximated by:

$$\bar{d}_i = \frac{1}{N}\sum_j d_{ij} P_j \qquad (1)$$

where P_j is the population size of municipality *j* and N is the population of the Netherlands. As distances to partners within the same municipality are not zero, these distances are approximated by:

$$d_{ii} = \tfrac{2}{3}\sqrt{\frac{area_i}{\pi}} \qquad (2)$$

where $area_i$ is the area of municipality *i* in square metres on January 1, 2004[4]. The underlying assumption of this formula is that the population is uniformly distributed within the municipality in the form of a circle.

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[4] A justification for the use of 2/3 radius for the intra-zonal distance estimate:
We assume a circular shape of the municipality, and a population density function $F(r) = d_0 r^{-a}$, where *r* is the distance from the centre, d_0 equal to the density in the centre, and *a* the density decay with increasing distance to the centre. We approximate the average distance to another person in the municipality by the average distance to the centre. The total distance that the population covers to the centre is equal to: $D = \int_0^R 2\pi r^2 F(r) dr$, and the total population in the municipality is equal to: $P = \int_0^R 2\pi r F(r) dr$. The average distance, *D/P* (total distance/population) is equal to: $D/P = \bar{D} = \frac{2\pi d_0 R^{2-a}}{2\pi d_0 R^{1-a}} \frac{2-a}{3-a} = \left(\frac{2-a}{3-a}\right) R$, with *R* being the radius of the municipality. If we assume a

Next, let $\bar{s}_i$ be the average distance to cohabitation partners for all those who started cohabiting in 2004 and who were living in municipality *i* on January 1, 2004.

The *standardized distance coefficient* for municipality *i* is calculated as:

$$SDC_i = \frac{\bar{s}_i}{\bar{\bar{d}}_i} \tag{3}$$

and is the dependent variable in the analysis. The coefficient of an area can be interpreted as anywhere in the range from a very short distance to a very long distance to partners, given the location of the area within the country. A municipality with a high coefficient might be situated in the Utrecht area (thus centrally located), with partners found at relatively long distances, whereas a low coefficient might be found in an area in the upper north, with relatively short distances to partners. A value of the coefficient of 0.5 implies that the average distance to partners in a specific area is half that of the average distance to all other Dutch people.

3.3.3 Operationalisation of variables

The explanatory variables are listed in table 3 and they are clarified in the subsequent paragraphs. The spatial units of analysis are the 483 municipalities of the Netherlands in the year 2004.

Compositional effects are measured by demographic and socio-economic variables. Firstly, the percentage of the population that is aged between 25 and 45 years on January 1, 2004 was determined for each municipality. Among the new cohabiters, 65 percent of them fall within this age group (Haandrikman et al. 2008a), making this the most appropriate target group for persons looking for a partner. Socio-economic status was operationalised by educational level and income. The average educational level of cohabiters in each municipality was constructed from the CRIHO file. For each cohabiter, it was determined whether that person was recorded in the CRIHO file, thereby offering an approximation of the educational level 'higher educated'. Then, the percentage of cohabiters that ever studied was calculated for each municipality. Income was operationalised as the total financial income from all jobs and other resources, such as real estate revenues and other assets. The income data is based on persons with 52 weeks of income, including the self-employed. Income units were distributed across ten

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homogeneous distribution of the population, *a*=0, and the average distance reduces to: $\bar{D} = \frac{2}{3}R$. Finally, we have to make an estimate of *R*, based on the size of the municipality *A*. In a circular municipality $A = \pi R^2$, and thus $R = \sqrt{A/\pi}$. Therefore, the intra-zonal distance is estimated as $d_{ii} = \frac{2}{3}\sqrt{A/\pi}$.

percent classes, which are of equal size. The data include persons living in one of the 467 municipalities on January 1, 2005. Because of municipal redistributions since 2004, several adaptations were made[5]. For the regional analysis, the percentage of inhabitants in the lowest and the highest income group in each municipality was included.

Table 3. Explanatory variables

Explanatory factors		Variables	Source
Compositional effects			
Demographic characteristics	Age group	Percentage of population aged 25-45 years	Statistics Netherlands[6]
Socio-economic characteristics	Educational level	Percentage of cohabiters that studied at an institute of higher education	CRIHO
	Income	Percentage of population in lowest income group (<€ 6,700)	Statistics Netherlands[7]
		Percentage of population in highest income group (>€ 24,300)	
Spatial determinants			
Degree of urbanisation		Average surrounding address density (/1,000)	Statistics Netherlands
Regional cultural differences			
Religion		Index for Protestant conservatism	Brons (2006)
Language		Living in Frisian-speaking area	
		Living in Low Saxon-speaking area	
		Living in Limburgish-speaking area	
Value orientations		Index for post-materialism	Brons (2006)
		Index for classic individualism	Brons (2006)

Spatial determinants of regional variation in spatial homogamy were operationalised by examining the degree of urbanisation of the municipalities. Statistics Netherlands annually measures the extent of concentration of human

[5] For 20 municipalities that ceased to exist as per January 1, 2005, mostly in the province of Gelderland, income data from the Regional Income Distribution 2003 is used instead. Moreover, two municipalities have missing data on the lowest income percentile, namely Rozendaal and Thorn. For these municipalities, the average of the adjacent municipalities is taken instead.

[6] From Regional Core Statistics, Statistics Netherlands.

[7] From Regional Income Distribution 2004, Statistics Netherlands. The data are based on registers from the Ministry of Finance and the population register (GBA), combined with a sample of 1.9 million households.

activities (houses, jobs, schools, shops, pubs, and so forth) by calculating the average surrounding address density. The surrounding address density is the number of addresses within a circular area around an address with a radius of one kilometre, divided by the square of the circle, and it is calculated for each 500 by 500 metre square containing at least one address. The resulting variable is expressed in the number of addresses per square kilometre. For the regional analysis, the average surrounding address density per municipality, calculated for each 500 by 500 metre square per January 1, 2004, was used, divided by 1,000[8].

Regional cultural differences were operationalised through a set of value orientations and language variables. As religion is not documented on a large scale, it was operationalised through Brons's value orientation 'Protestant conservatism', as it is most strongly related to religion, especially Protestantism (Brons 2006). Language was operationalised by distinguishing three core areas in which Frisian, Low Saxon, and Limburgish are spoken. Frisian is widely spoken in the province of Friesland, whereas Limburgish is the regional language of Limburg. Low Saxon is spoken in a larger area, namely in Groningen, Drenthe, Overijssel and parts of Gelderland, which were classified as Low Saxon-speaking areas. Local value orientations were operationalised by two dimensions of core value orientations, namely post-materialism and classic individualism, as they approximate measures of modernisation[9]. These regional variables were measured at the municipal level, and were based on demographic, religious and voting behaviour in the period from 1997 to 2003. As we expect these value orientations not to have changed within one year, the data has been applied to the municipalities of the year 2004[10]. They were matched to the municipality where cohabiters lived before they started living together with their partner on January 1, 2004.

3.3.4 Methodology of the spatial data analysis

Exploratory spatial data analysis was used to analyse the dependent and independent variables, using ArcGIS and GeoDa (Anselin et al. 2006). Spatial regression techniques were applied to explain spatial patterns of spatial homogamy.

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[8] The Pearson correlation between the degree of urbanisation and the average distance to all other inhabitants (the numerator of the standardized distance coefficient) is -0.26 (p<0.01).

[9] We use the index of post-materialism corrected for degree of urbanisation, education and income (Brons 2006). The resulting correlation between post-materialism and degree of urbanisation is only 0.10 (p<0.05). Likewise, we used the index of classic individualism corrected for education and income (Brons 2006). The correlation with degree of urbanisation is -0.11 (p<0.05).

[10] In 2004, 11 municipalities ceased to exist and were merged into five new municipalities. The indices for the new municipalities were recalculated by weighing the indices with the population of the old municipalities in 2003.

In spatial analyses, spatial autocorrelation may cause problems. In our study, there is a mismatch between the spatial unit of analysis, i.e. municipalities, and the spatial extent of local partner markets. We know that in 2004, the average distance to a cohabitation partner before cohabitation was 23 kilometres (Haandrikman et al. 2008a), while the average diameter of a municipality is about 5 kilometres. In other words, in explaining spatial homogamy, neighbouring municipalities should be taken into account as well. To detect any possible spatial autocorrelation in data, the spatial dependence between observations needs to be modelled by means of the definition of a spatial weights matrix. In our study, two types of spatial weights matrices are used to test which matrix corrects the problem of spatial autocorrelation in the best way[11]. The first weights matrix is the so-called first-order Queen's contiguity-based matrix, in which municipalities with adjoining borders or corners are neighbours. A second-order Queen's contiguity matrix also takes neighbours of neighbours into account. All spatial regression models are estimated using maximum likelihood methods in GeoDa.

Although the basis for our study is microdata, the analysis is based on aggregated spatial data, which obviously entails disadvantages of ecological fallacies, spurious relations, and the modifiable areal unit problem (Anselin 2002). However, since our interest is in regional differences in partner choice behaviour and its potential explanatory factors on a regional level, we believe that our methodology is justified, although care is needed in the interpretation of results.

3.4 Results

In this section the exploratory spatial data analysis of the dependent and independent variables is described, followed by the specification of the multivariate regression model and the spatial regression model.

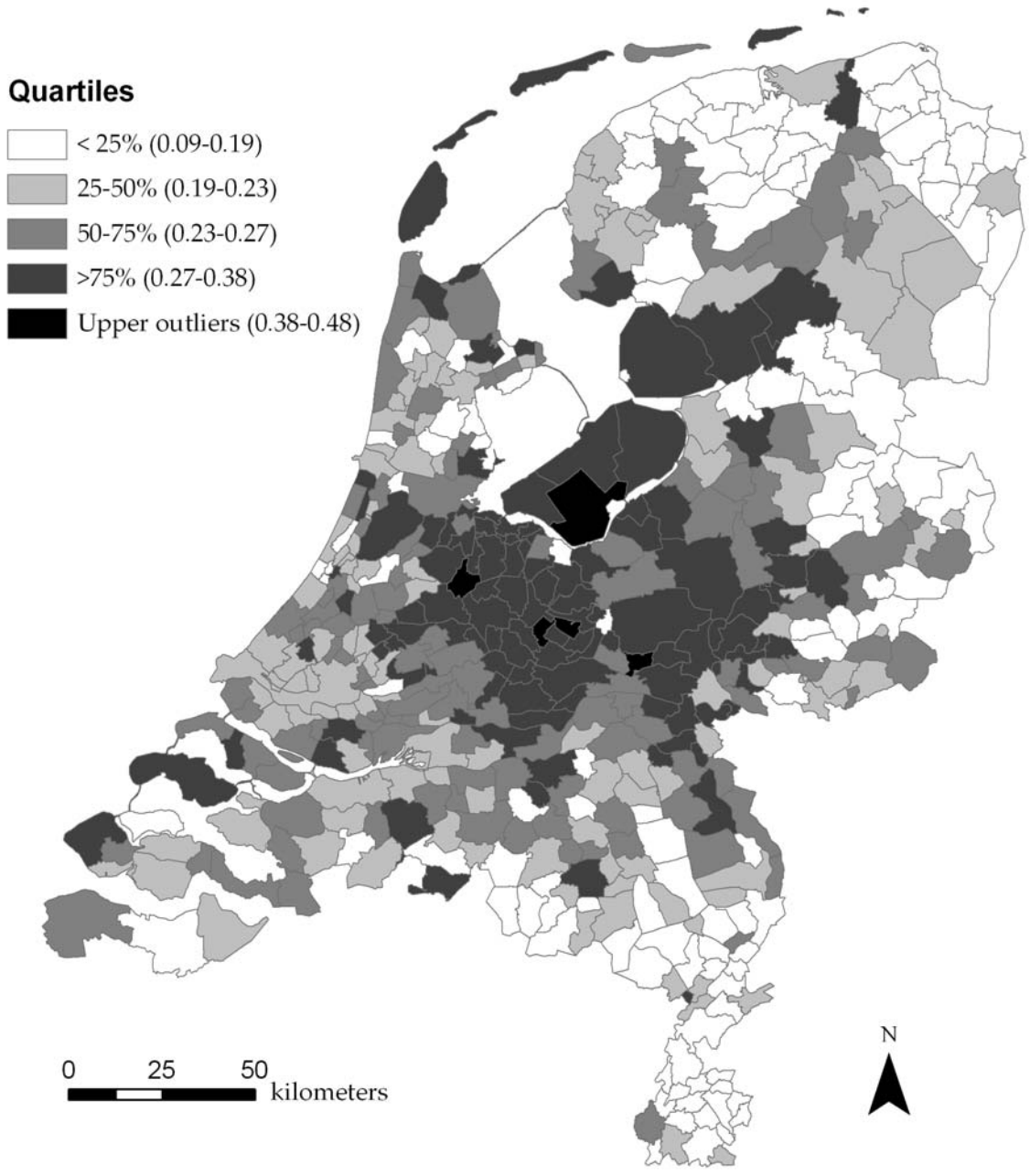
3.4.1 Exploratory spatial data analysis

Figure 1 shows the map of the standardized distance coefficients for all 483 municipalities in the Netherlands in 2004. The average standardized distance coefficient for the whole of the Netherlands is 0.23; with the coefficient ranging from 0.09 to 0.48. Areas with a high standardized distance coefficient are municipalities which have a longer distance between partners compared to the expectation on the basis of their geographic location and number of inhabitants, and vice versa. The spatial variation in spatial homogamy is evident, even when corrected for population density and geographic location of municipalities. A

[11] Spatial weights matrices constructed on Rook-based contiguity and distance-based contiguity using the average distance between partners in 2004 were also conducted, but yielded very similar results.

cursory visual assessment demonstrates a clustering of high values in centrally located municipalities, and local clusters of low values in the north, east and south of the country.

Figure 1. Map of standardized distance coefficients



Source: © 2005, Statistics Netherlands / Topografische Dienst Kadaster

Using the different spatial weights matrices, Moran's I is calculated to test for spatial autocorrelation (table 4). Moran's I is significant using both matrices, meaning that the null hypothesis of spatial randomness can be rejected. The positive values of Moran's I indicate positive spatial autocorrelation, or municipalities with low or high standardized distance coefficients are clustered in space.

Table 4. Moran's I of the standardized distance coefficient for different weights matrices

Type of weights matrix	Queen's first-order contiguity	Queen's second-order contiguity
Moran's I	0.539 ***	0.475 ***

***: significant at 0.001. This is a pseudo significance calculated with a randomisation process with 999 permutations.

Table 5 displays some descriptive statistics of the independent variables taken into account in the regression model.

Table 5. Descriptive statistics of independent variables

Variable	Mean	Standard deviation	Range	N[12]
Population aged 25-45 years (%)	28.2	2.3	20.2 - 38.4	478
Cohabiters that studied at an institute of higher education (%)	25.6	7.1	10.2 - 61.5	478
Population in lowest income group (<€ 6,700) (%)	10.8	1.6	7.0 - 19.0	478
Population in highest income group (>€ 24,300) (%)	21.0	5.1	9.0 - 44.0	478
Average surrounding address density/ 1000	0.89	0.7	0.1 - 6.0	478
Index for Protestant conservatism	0.00	1.0	-1.4 - 6.2	478
Living in Frisian-speaking area	0.06	0.2	0 - 1	478
Living in Low Saxon-speaking area	0.28	0.5	0 - 1	478
Living in Limburgish-speaking area	0.10	0.3	0 - 1	478
Index for post-materialism[13]	0.01	0.5	-1.83 - 1.53	478
Index for classic individualism[14]	0.00	0.4	-1.72 - 1.48	478

[12] The five Wadden islands are not considered.
[13] Corrected for degree of urbanisation, education and income.
[14] Corrected for education and income.

3.4.2 Multivariate regression model

An OLS estimation of a linear regression model is conducted to understand the global relationships between spatial homogamy and compositional effects, spatial determinants, and regional cultural differences. Regression results are presented in table 6. Coefficients and t-statistics are summarised in the first two columns of the table, and model fit statistics are provided below the coefficients. As spatial autocorrelation was found in the data, the OLS coefficients are likely to be biased in the absence of a spatial lag. After correcting for the problem of spatial autocorrelation, the model gives more reliable coefficients. The spatial diagnostics based on the two different spatial weights matrices show that both types of models could be appropriate (Anselin 2005). However, based on theoretical considerations - we expect spatial autocorrelation in the residuals - a spatial error model was chosen.

3.4.3 Spatial regression

Spatial regression analysis is conducted to explain geographical variation in spatial homogamy at the municipal level, taking the spatial autocorrelation in the disturbance terms into account. The spatial error model is specified as follows:

$$y = X\beta + \varepsilon, \tag{4}$$

$$\varepsilon = \lambda W\varepsilon + \xi \tag{5}$$

where y is a vector of observations for the dependent variable, X is a matrix of observations for the explanatory variables, β is a vector of parameters to be estimated, and ε is a vector of spatially correlated residuals. W is the spatial weights matrix, ξ is a vector with residuals, and λ is the spatial autoregressive coefficient for the error lag $W\varepsilon$.

The models were run by means of maximum likelihood, where the spatial regression models included a spatial autoregressive error term. Coefficients, z-values and accompanying significance levels are displayed in table 6. To begin the comparison, it is useful to examine the model fit statistics for both the OLS and the spatial error models. It is not appropriate to use the R^2 as an indicator for model fit, since the R^2 given by maximum likelihood are so-called pseudo-R^2, which cannot be compared to OLS results. The proper measures are log-likelihood, the Akaike information criterion (AIC) and the Schwartz criterion (SC). The log-likelihood is highest for the model based on the Queen's criterion with second-order contiguity, thus when neighbouring municipalities and adjacent municipalities are taken into account. Compensating the improved fit for the added variable, the AIC and SC both decrease relative to OLS, again suggesting an improvement of fit. The error model based on a Queen's second-order spatial weights matrix gives the best results.

Table 6. OLS and spatial regression results*

Dependent variable: standardized distance coefficient	OLS			Spatial error model based on Queen's 1st order contiguity			Queen's 2nd order contiguity		
	coefficients	t-statistic		coefficients	z-value		coefficients	z-value	
Constant	-0.043	-0.977		0.130	3.113	****	0.127	3.037	***
Compositional effects									
% Population aged 25-45 years	0.006	4.570	****	0.001	1.121		0.001	0.896	
% High educated	0.001	3.250	***	0.001	3.463	****	0.001	3.670	****
% In lowest income group (< € 6,700)	-0.002	-1.123		-0.003	-1.750	*	-0.002	-1.500	
% In highest income group (> € 24,300)	0.005	8.428	****	0.003	4.768	****	0.003	4.875	****
Spatial determinants									
Address density / 1000	-0.005	-0.954		0.006	1.314		0.007	1.571	
Regional cultural differences									
Index for protestant conservatism	0.012	4.778	****	0.002	0.548		0.002	0.695	
Living in Frisian-speaking area	0.003	0.317		-0.011	-0.658		-0.001	-0.078	
Living in non-Frisian-speaking area (ref)	0.000			0.000			0.000		
Living in Low Saxon-speaking area	0.014	2.281	**	0.004	0.446		0.004	0.439	
Living in non-Low Saxon-speaking area (ref)	0.000			0.000			0.000		
Living in Limburgish-speaking area	-0.029	-3.363	****	-0.033	-2.579	****	-0.025	-1.619	
Living in non-Limburgish-speaking area (ref)	0.000			0.000			0.000		
Index for post-materialism	0.035	7.400	****	0.022	5.036	****	0.023	5.364	****
Index for classic individualism	0.019	3.330	****	0.020	3.918	****	0.022	4.483	****
Lambda				0.592	13.002	****	0.788	17.707	****

(table 6 continues on next page)

(*table 6 continued)*

Dependent variable: standardized distance coefficient	OLS	Spatial error model based on Queen's first-order contiguity	Queen's second-order contiguity
Test statistics			
Log likelihood	805.33	855.89	876.17
R^2	0.40	0.55	0.58
Akaike info criterion	-1,586.67	-1,687.77	-1,728.35
Schwarz criterion	-1,536.63	-1,637.74	-1,678.31

* Levels of significance: * 0.1 ** 0.05 *** 0.01 **** 0.001.

Ignoring the addition of a spatial lag to the regression equation, and estimating the model using OLS may lead to an overestimation of the magnitude of the parameters, to the extent that the spatial error parameter lambda is statistically significant (Anselin 2005). The spatial autoregressive coefficient is estimated at 0.592 for the Queen's first-order model and 0.788 for the Queen's second-order model, and the coefficient is highly significant for both models. The addition of the extra spatial variable in the model leads to some changes in the coefficients of the error model in comparison with the OLS model, as discussed in the following.

The first hypothesis was not confirmed using the spatial error models. The percentage of 25 to 45-year-olds in a region does not have an impact on the standardized distance coefficient of that area. Additional models for different age groups and different stages in the life course were also specified, i.e. models for young singles, cohabiters who were living in the parental home before, and those who were living with children before, but these yielded no evident differences.

Not surprising, socio-economic differences between regions do explain variation in spatial homogamy (hypothesis 2). Higher percentages of higher educated persons lead to an increased standardized distance coefficient. This finding is robust throughout the error models. Income differences also contribute to differences in spatial homogamy. Especially high shares of high income groups have a large impact: areas with higher average income have higher standardized distance coefficients. In addition, in municipalities with a high concentration of low income groups, partners are found at significantly shorter distances.

Contrary to expectation, level of urbanisation does not influence distances between partners; none of the models supports our third hypothesis.

The third set of hypotheses yields some mixed results. We do find an effect of modernisation on spatial homogamy: with increasing levels of post-materialism and individualism, distances between partners increase (hypothesis 6). This finding is robust throughout the models. Religion, measured by the index of Protestant conservatism, was expected to negatively influence the standardized

distance coefficient (hypothesis 4), but we find a positive effect in the OLS model and no effect using the spatial error model. The fifth hypothesis, on the effect of speaking a regional language on spatial homogamy cannot be supported either. Using first-order contiguity, only speaking Limburgish is found to decrease the value of the standardized distance coefficient, but this effect disappears when adjacent municipalities are taken into account.

3.4 Conclusions and discussion

This article examined spatial variation in spatial homogamy in the Netherlands, by taking three sets of explanations into account: compositional effects, spatial determinants, and regional cultural differences. Spatial homogamy is measured by means of a methodological novelty, a *standardized distance coefficient* that measures the distance between partners before cohabitation, and standardises for regional differences in residential location and population density. Since partner markets operate on a local level, neighbouring municipalities were taken into account in the spatial regression. A spatial autoregressive coefficient was estimated and was found highly significant, using different types of spatial weights matrices. By including this added spatial variable, spatial bias in the results is avoided, which would otherwise have resulted in distorted findings.

The study is unique since it has been able to relate spatial homogamy to a set of variables, on a very detailed level, for a whole country. The scale of the current analyses is the strength of the study, in which results from previous studies were largely confirmed. Of the three sets of explanations taken into account, compositional effects, and particularly socio-economic characteristics, together with regional cultural indicators are the most important in explaining regional variation in spatial homogamy.

Demographic composition of the population, measured as the percentage of 25 to 45-year-olds, does not affect distance to partners, although it does when spatial autocorrelation is not taken into account. The reasons for this result are not clear. Completely in line with previous studies, the effect of socio-economic characteristics is highly evident. New is that higher income and a higher educational level not only lead to increased distance to partners at the individual level, but also at the regional level.

The impact of spatial determinants on spatial homogamy was partly accounted for in the definition of the standardized distance coefficient, but was also considered by testing degree of urbanisation as an explanatory factor in the model. However, this spatial factor was found to be non-significant throughout the models. There is no effect of population density when compositional and regional cultural indicators are controlled for. It might be that (some) partners are found at

shorter distances in highly populated areas, but that others are found at (very) long distances. Indeed, analysis of distances to partners across lower regional units shows that there are many urban low-income neighbourhoods in which partners are found at (very) short distances. Our finding might be resulting from this combined effect.

In fact, this study adds to existing work that it is not urbanisation that is causing wider spatial horizons, but it is the value orientations of people which leads to a more global outlook. The modernisation indicators post-materialism and individualism partly explain regional patterns of spatial homogamy: the more post-materialistic and individualistic the area, the greater the distances to partners. The finding that regional cultural differences do account for part of the regional differences in spatial homogamy is consistent with and adds to studies conducted in the framework of the European Fertility Project (Coale and Watkins 1986). Modernisation theory assumes that boundaries between groups become less strong as modernisation proceeds. The growth in education, the increased importance attached to education, the increase in social and geographical mobility, and the expansion of the welfare state have enhanced the autonomy of individuals and have decreased the effectiveness of sanctions on social norms. These economic, social and cultural changes have had a major impact on interpersonal relationships: Beekink et al. (1998) found for the Netherlands that geographical horizons tended to widen in the last two centuries, when these changes took place. We state that value orientations have am impact on spatial homogamy, thereby complementing to studies on increasing openness of societies during modernisation processes (e.g. Smits 1996; Van de Putte 2003).

One exception to the above statement is that we did not find an effect of religion on spatial homogamy, measured as protestant conservatism, although this was expected. Religion can also be seen as part of regional culture or as an indicator of modernisation, which makes it more surprising, that in conservative cultures, partners are not found at shorter distances. The municipality with the shortest distances to partners, Urk, with a median of 800 metres between cohabiters before cohabitation, also has the highest score on Protestant conservatism. However, Urk, and other protestant strongholds such as Rijssen en Spakenburg, have some of the highest residual levels, indicating that spatial homogamy in this area is related to religion or related cultural factors, that were not accounted for in this article. Better data on religiosity of the inhabitants of different areas might shed a different light on the matter. Besides, the definition of the dependent variable might lead to overestimation of the distances between partners in the middle of the country, which partly coincides with the Bible belt.

Another component of culture, language, was partly found to account for regional differences in spatial homogamy. Further research using micro data on language might shed more light on the interaction between linguistic and spatial homogamy.

This study is part of a PhD research into the spatial dimension of partner choice. In a subsequent paper, the available microdata is optimally used by applying a random utility model to the probability to find a partner given mutual demographic, socioeconomic, cultural and spatial characteristics, also including information on where people work and study, as a considerable number of people meet at these places (Haandrikman 2010). We would have liked to include data on meeting places in the current analysis, for instance the number of bars, voluntary associations, or schools. Unfortunately, most data is not detailed enough at the municipal level. Secondly, sometimes too high correlations might result between meeting places and degree of urbanisation, percentage higher educated and young population.

We have provided new insights into spatial assortative mating, by applying methods from spatial econometrics. Cupid's wings are not adapted for long flights, but higher educational level, high income, and post-materialist and individualist value orientations make Cupid fly further from home.

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4 REGIONAL VARIATION IN SHORT DISTANCE HOMOGAMY AND SPATIAL HETEROGAMY[21]

ABSTRACT

A third of all Dutch cohabiters choose a partner from the same municipality, while about four percent choose a partner from abroad. This article analyses the regional variation in both these phenomena, and it explains this variation in terms of geographical, socioeconomic, demographic and cultural determinants. Population register data on all new cohabiters in 2004 were used. Regression methods were employed to explain spatial patterns. Regional variation in short distance homogamy is largely explained by geographical indicators, namely the size of an area, the degree of urbanisation and whether residence is located in a border municipality, while the most important determinant of spatial differences in spatial heterogamy is the composition of the population: in areas with a high proportion of immigrants, spatial heterogamy tends to be higher. Moreover, spatial patterns of short distance homogamy and spatial heterogamy are partly explained by cultural differences between regions.

4.1 Introduction

Geographical distance is a critical factor in partner choice. Most people choose a partner who lives within a short distance, and the Netherlands is no exception (Haandrikman et al. 2008a). This geographical similarity between partners has been referred to as spatial homogamy, in addition to for instance social, educational, occupational, ethnic, religious and linguistic homogamy, which have

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been found for most populations (e.g. Hendrickx 1994; Kalmijn 1994; Schwartz and Mare 2005; Stevens and Schoen 1988; Uunk 1996). A recent study (Haandrikman et al. 2009) established considerable regional variation in the geographical distances between partners before cohabitation in the Netherlands, and it attributed most of the spatial differences to compositional effects, in particular socioeconomic characteristics of partners and to value orientations that are regionally differentiated. Less is known about the explanatory factors in those regions in which the extent of spatial homogamy, or short distance homogamy, is most explicit, as well as in those areas where spatial heterogamy, or the extent to which partners are chosen from far away, is most pronounced. The key questions addressed in this study are therefore: which factors explain regional differences in choosing partners from the same area, and which factors explain regional differences in choosing partners from abroad?

The spatial dimension of the partner market gives an indication of the extent of social contact between groups. High rates of spatial homogamy may indicate a high level of cohesion within a spatially defined group, while increasing spatial heterogamy indicates decreasing social distance between groups and increasing social openness (following Kalmijn 1998; Smits 1996). In addition, trends in spatial heterogamy may impact processes of integration. Moreover, intermarriage by different nationalities is of interest because of the contribution to the development of networks, lifestyles, as well as to the transcendence of national identities.

4.2 The spatial dimension of partner choice

The spatial dimension of the partner market has been addressed in a number of studies, the bulk of which was written in the 1940s and 1950s, mostly in the UK and the US. Most studies found that the number of marriages declines as the distance between potential spouses increases. In the Netherlands, spatial homogamy has been addressed in a number of historical studies, as discussed by Van Poppel and Ekamper (2005). In the 21st century, the Dutch still choose spatially homogamous partners: half of all new cohabiters find their partner within a 6-kilometre distance (Haandrikman et al. 2008a). These short distances are due to a number of factors. Firstly, proximity increases the likelihood of spontaneous encounters, and therefore distance decay strongly influences interaction, and hence partner choice. Moreover, notwithstanding increases in mobility, educational enrolment, and leisure time, bridging distance (still) involves time, energy and costs, and therefore partner choice occurs mostly at the local level. As a third factor, physical barriers, population density and degree of urbanisation influence the access to potential partners and therefore impact meeting opportunities. Living in peripheral areas and having to cross water bodies

increases the average travel distances between partners. Fourthly, the spatial pattern of potential candidates with certain characteristics influences partner choice. Geographical clustering of socio-economic attributes or of religion, dialect or other cultural assets may give rise to feelings of cultural proximity among people, leading to the preference of a spatially homogamous partner. The preference for a partner with the same cultural qualities stimulates the choice of a partner from the same or a culturally related region, since people in the same or related regions share the same language and are assumed to share the same ideas concerning partnerships, family, and religion (Van Poppel and Ekamper 2005).

Regional variation in partner choice results from different processes. Four sets of determinants have been identified: geographical, socioeconomic, demographic and cultural factors. The following sections describe these factors and discuss the expectations at the outset of the current study.

4.2.1 Geographical influences

Regional variation in partner choice may partly be explained by geographical factors. Theoretically, spatial homogamy might be expected to be stronger with increasing level of urbanisation, due to high concentrations of people, jobs, educational opportunities and places of entertainment in urban areas. These concentrations mean a larger pool of potential partners and abundant meeting opportunities. On the other hand, increasing urbanisation widens the extent of social circles, implying an increasing distance at which partners are found (e.g. Blau 1977), maybe even very great distances, crossing borders. In a micro level analysis, distances to partners were found to be significantly longer for people living in peripheral and low density areas (Haandrikman et al. 2008a). However, in a spatial analysis explaining distances to partners, controlling for other factors such as education, income and culture, no effect of urbanisation was found (Haandrikman et al. 2009). This finding might result from two partner markets operating separately: one in which partners are found (very) near by and one in which partners are found (very) far away. The current paper offers the opportunity to investigate the effect of urbanisation in the two specific cases of short distance homogamy and spatial heterogamy. We expect increasing urbanisation to lead to increased short distance homogamy, as well as to increased spatial heterogamy.

Living in a border area is presumed to lead to decreased spatial homogamy and increased spatial heterogamy, since the partner market in these areas probably extends across the border. Another pure geographical factor is the size of the region under study. We expect that with increasing size of an (administrative) area, spatial homogamy increases. For instance, if the spatial unit is municipality,

one would expect that in bigger municipalities, relatively more partners are found within municipal borders.

4.2.2 Socioeconomic influences

Many studies have found that the higher social classes tend to find partners at greater distances from their place of origin (e.g. Clegg et al. 1998; Coleman and Haskey 1986; Haandrikman et al. 2008b; Küchemann et al. 1974; Van Poppel and Ekamper 2005). A combination of preferences, strong norms to marry within the class, and geographically extensive opportunities to meet partners might lead to greater distances. Especially in the past, the lower social classes were more often locally oriented, partly because of limited means, including the means of travel. As people with the same characteristics tend to cluster in space (Goode 1982; Winch 1971), regional differences in marital distances between different socio-economic groups may result. Indeed, Haandrikman et al. (2009) found that regional educational and income differences explained a major part of regional differences in distances between partners. Based on these findings, we expect more short distance homogamy and less spatial heterogamy in areas with a concentration of lower social classes.

4.2.3 Demographic influences

As age homogamy is more common than age heterogamy (De Graaf et al. 2003; Van Poppel et al. 2001), the availability of potential partners in certain age groups affects meeting and mating opportunities. The most extreme case is the so-called 'marriage squeeze', where men or women face a shortage of partners their age because of variations in birth numbers (Ni Bhrolcháin 2001). For the current study we expect that in areas with a relatively low share of potential partners in the typical partnership age range, the share of partners chosen from that area will be smaller. Furthermore, the composition of the population in terms of descent may influence the extent of spatial heterogamy. In areas with immigrant clusters, spatial heterogamy may be greater. We distinguish immigrants from western and non-western descent. The presence of a high proportion of people of western descent, including diplomats, high skilled workers and students, may lead to increased partner choice across the border; i.e. immigrants of western descent may choose partners of a similar nationality who still live in the country of origin. Especially the presence of Belgians and Germans is expected to lead to increased spatial heterogamy, given their proximity to the Netherlands. In some Dutch municipalities bordering Belgium, the number of Belgians is 30 times the average number in the rest of the country (Van Agtmaal-Wobma et al. 2007). About 6 percent of Belgian men and 15 percent of Belgian women move to the Netherlands

for reasons of family formation or reunification (Van Agtmaal-Wobma et al. 2007). Germans in the Netherlands mostly live in the eastern provinces (Garssen and Sprangers 2002). Therefore, spatial heterogamy may be greater in these areas. Moreover, the existence of a large proportion of people of non-western descent may also increase spatial heterogamy. In the Netherlands, Turks and Moroccans are the largest groups of inhabitants with a non-western background (Statistics Netherlands 2008a). These groups choose their partners primarily from their own ethnic group, and within this group, they tend to choose partners from their country of origin, i.e. Turks and Moroccans who live in the Netherlands tend to marry partners who grew up in their respective country of origin (Hooghiemstra 2003; Van Huis 2007; Van Huis 2008). Although the share of so-called marriage migrants has decreased in recent years (because of new legal and immigration measures introduced in 2004 to reduce marriage migration), the proportion is still significant (Van Huis 2007). As the focus of this article is to identify the factors that lead to regional differences in spatial heterogamy - or the extent to which partners from abroad are chosen - the proportion of Turks and Moroccans in an area is expected to positively influence the extent of spatial heterogamy.

4.2.4 Cultural influences

Regional differences in nuptiality have in the past been found to be related to cultural factors: regions with similar cultural characteristics showed similar patterns of marriage, even after controlling for the level of modernisation (Coale and Watkins 1986). Regional cultural differences in religion, language and value orientations are among the most studied and important variables in this regard. Nowadays, religion still serves as a strong predictor of spatial demographic differences in the Netherlands (Sobotka and Adigüzel 2002). In spite of the ongoing secularisation process, some Christian denominations still have a marked influence on demographic behaviour through the shaping of attitudes concerning family matters. A recent study by Haandrikman et al. (2008a) found that spatial homogamy is particularly high in the Bible belt, a strip of towns and villages stretching from the southwest to the north of the Netherlands (see also Knippenberg 2005). The Dutch tend to marry within their religious group and the level of endogamy differs per denomination (Hendrickx 1994). Especially members of the Protestant denominations are more endogamous than the more liberal denominations. Therefore, we expect religion to exert a strong effect on the regional distribution of spatial homogamy.

As linguistic differences act as broad cultural borders, linguistic groups may be created (e.g. Van Langevelde 1999). Speaking a dialect or regional language may induce a preference for partners from the same language group, as was found in

the US (Stevens and Schoen 1988). Language then acts as a factor that fosters cultural proximity. In the Netherlands, there are three officially recognized regional languages (as stated in the European Charter for Regional or Minority Languages) besides standard Dutch, namely Frisian, Low Saxon, and Limburgish. Regional language speakers are geographically clustered, which is clearly illustrated by the dialect map of Daan and Blok (1969) that identified 28 geographically clustered dialect groups on the basis of the perception of dialect speakers. Heeringa (2004) showed that the three recognized languages are spoken in areas with significant borders around them, as measured by dialect distances. We therefore expect that speaking a regional language increases the likelihood of spatial homogamy and decreases the chance of finding a partner from abroad.

As demographic behaviour has been found to be influenced by value changes (e.g. Van de Kaa 2001), differences in value orientations may lead to different levels of spatial homogamy and spatial heterogamy. Brons (2006) studied dimensions of regional Dutch culture and found considerable regional variation in value orientations. His measurement of value orientations is derived from indirect measures of demographic behaviour, religious adherence, and voting behaviour, and it is based on Hofstede's (1980; 1991) study of national cultures. Three dimensions of regional culture are expected to have an impact on spatial homogamy: *post-materialism, classic individualism*, and *Protestant conservatism*[22]. High scores on post-materialism and classic individualism are related to modernisation, as they indicate an increased focus on self-development, little religious influence, and reduced focus on traditional households and families. Haandrikman et al. (2009) found that distances to partners are significantly higher in areas with high scores on these dimensions. Modernisation thus impacts the distance at which partners are found. We therefore expect that with high scores on these modernisation indices, the extent of spatial heterogamy will be greater while the level of spatial homogamy will be less. The dimension *Protestant conservatism* represents conservative cultures, with high levels of male dominance and uncertainty avoidance. Given the resemblance to characteristics of Bible belt

[22] High scores on *post-materialism* are associated with a focus on self-development / self-expression, co-operative and egalitarian, (very) small households, high voting support for progressive parties and environmentally conscious, while low scores are associated with a focus on material wellbeing, competitive and authoritarian, large households, and high vote counts for conservative parties. High scores on *classic individualism* are associated with more importance for the individual, postponement of marriage and childbearing and many votes for liberal parties, while low scores are associated with more importance for national or collective interests and relatively early marriage and childbearing. High scores on *Protestant conservatism* are related to predominantly Protestant areas, early marriage and childbearing, traditional households and families and male dominance, while low values are related to predominantly Catholic areas, few early marriages and childbearing (adapted from Brons, 2006, p. 562).

inhabitants, high scores on Protestant conservatism are expected to lead to increased spatial homogamy and decreased spatial heterogamy.

4.3 Data and methods

To measure the extent of short distance homogamy and spatial heterogamy, aggregated population register data were used. In addition to selecting all new married couples in the year 2004, all new unmarried cohabiters in that year were included, based on household positions assigned by Statistics Netherlands. All those who were cohabiting on 1 January 2005, and who were not cohabiting the year before, were considered. The resulting dataset contains 326,000 individuals, or 163,000 couples. Geographic origin of partners was measured by the address before cohabitation, i.e. on 1 January 2004. The municipality is the spatial unit of analysis, and there were 483 municipalities in the Netherlands in 2004. Short distance homogamy was measured as the proportion of chosen partners from the same municipality; spatial heterogamy was operationalised as the proportion of chosen partners not living in the Netherlands the year before cohabitation and not born in the Netherlands. We use the logit transformation of the proportions

$$\text{logit}\,(p) = \ln\left(\frac{p}{1-p}\right)$$

as the dependent variable. This transformation guarantees that predicted proportions always fall within the range 0-1.

As the main interest in this paper is in the spatial differences in partner choice behaviour and its potential explanatory factors, a spatial analysis was conducted, using aggregate data. This type of analysis entails the risk of ecological fallacies, and care is needed in the interpretation of results.

Data on explanatory variables were derived from several sources. Included *geographical* variables are the size of a municipality, the average surrounding address density of an area that was used as a measure of degree of urbanisation (both derived from Statistics Netherlands), and a dummy indicating whether a municipality borders Germany or Belgium or not. Secondly, *demographic* variables on the composition of the population were incorporated. Since most new cohabiters are aged 25 to 45, the proportion of the population in this age group was calculated for each municipality. Moreover, the proportion of immigrants of western and non-western descent per municipality was taken into account. Statistics Netherlands defines an immigrant ('allochtoon') as a person with at least one parent born abroad, with western descent being defined as originating from one of the countries in Europe (excluding Turkey), North America, Oceania, Indonesia or Japan. Two groups of non-western immigrants were incorporated in the analysis, namely Turks and Moroccans. A third set of variables on *socio-*

economic status contains educational level and income. As a proxy for the level of education, the proportion of cohabiters that ever studied at an institute of higher education was included. This variable was constructed based on linkage of our cohabiters file with a micro dataset from the so-called CRIHO files, which lists all persons who studied at an institute of higher education in the Netherlands in the period 1986-2004. Matching the CRIHO files with the cohabiters file, the educational level of a person was approximated by creating a dummy variable for 'ever studied at a university or vocational training institute'. Regional income statistics were derived from the Regional Income Distribution 2004[23] from Statistics Netherlands. Income was operationalised as the total financial income from all jobs and other resources, such as real estate revenues and other assets. For the regional analysis, the proportion of inhabitants in the lowest (less than €6,700 per annum) and the highest (more than €24,300 per annum) income group in each municipality were included. The data include everyone living in one of the 467 municipalities on 1 January 2005; due to municipal redistributions since 2004, some adaptations were made[24]. Finally, *cultural* indicators were measured by the earlier-mentioned dimensions of core value orientations proposed by Brons (2006) and by three regional language indicators. The dimensions Protestant conservatism, post-materialism and classic individualism are measured at municipal level, and they are based on demographic, religious and voting behaviour in the period from 1997 to 2003[25]. They were matched to the municipality where cohabiters resided before they started living together with their partner. By including the dimension on Protestant conservatism, a variable approximating religion was incorporated in the analysis.

Regional language was operationalised by distinguishing three core areas in which Frisian, Low Saxon, and Limburgish is spoken. Frisian is widely spoken in the province of Friesland, whereas Limburgish is the regional language of Limburg. Low Saxon is spoken in a larger area, namely in Groningen, Drenthe, Overijssel and parts of Gelderland, which were classified as Low Saxon-speaking areas.

Using standard linear regression of the logit of the proportion choosing a partner from the own municipality or from abroad potentially suffers from two problems. First, the logit transformation introduces heteroscedasticity in the error

[23] The data are based on registers from the Ministry of Finance and the population register (GBA), combined with a sample of 1.9 million households.
[24] For 20 municipalities that ceased to exist per 1 January 2005, mostly in the province of Gelderland, income data from the Regional Income Distribution 2003 was used instead.
[25] In 2004, 11 municipalities ceased to exist and were merged into 5 new municipalities. The indices for the new municipalities were recalculated by weighing the indices with the population of the old municipalities in 2003.

terms, which can be remedied using weighted regression. We used weights equal to $\sqrt{p(1-p)}$ which were rescaled to match the original sample. A second potential problem, generic in all spatial analyses, is the presence of spatial autocorrelation. Spatial autocorrelation may bias the estimates of the standard errors of the regression coefficients. In both models, the spatial autoregressive coefficient, as measured by the statistic Moran's I, was found to be significant but very small: 0.182 and 0.135 respectively, using a spatial weights matrix based on Queen's second-order contiguity. The model coefficients with and without correcting for spatial autocorrelation were highly similar. Therefore, we present the simplest models, without correcting for spatial autocorrelation.

4.4 Results

Table 1 displays some descriptive statistics of the independent variables included in either or both analyses.

Table 1. Descriptive statistics of independent variables

Variable	Mean	Standard deviation	Range	Valid N
Spatial				
Border municipality	0.16	0.4	0-1	483
Area of land (hectares/1,000)	7.24	6.5	0.2-46.0	483
Surrounding address density/ 1,000	0.90	0.7	0.1-6.0	483
Socioeconomic				
Proportion higher educated	25.40	7.2	10.2-61.5	483
Proportion lowest income group (<€6,700)	10.77	1.5	7.0-19.0	479[26]
Proportion highest income group (>€24,300)	20.72	4.8	9.0-44.0	481[26]
Demographic				
Proportion population aged 25-45 years	28.30	2.2	20.0-38.0	483
Proportion western descent	7.29	4.2	1.0-49.0	483
Proportion Turkish	0.88	1.6	0.0-9.0	483
Proportion Moroccan	0.68	1.3	0.0-9.0	483

(table 1 continues on next page)

[26] For four small municipalities, no data on low income was available, and for two of these, also no data on high income was available. The mean income for remaining municipalities was used instead.

(table 1 continued)

Variable	Mean	Standard deviation	Range	Valid N
Cultural				
Index for Protestant conservatism	0.01	1.0	-1.4-6.2	483
Index for post-materialism[27]	0.02	0.5	-1.8-1.5	483
Index for classic individualism[28]	-0.00	0.4	-1.7-1.5	483
Living in Frisian-speaking area	0.07	0.3	0-1	483
Living in Low Saxon-speaking area	0.28	0.5	0-1	483
Living in Limburgish-speaking area	0.10	0.3	0-1	483

4.4.1 Short distance homogamy

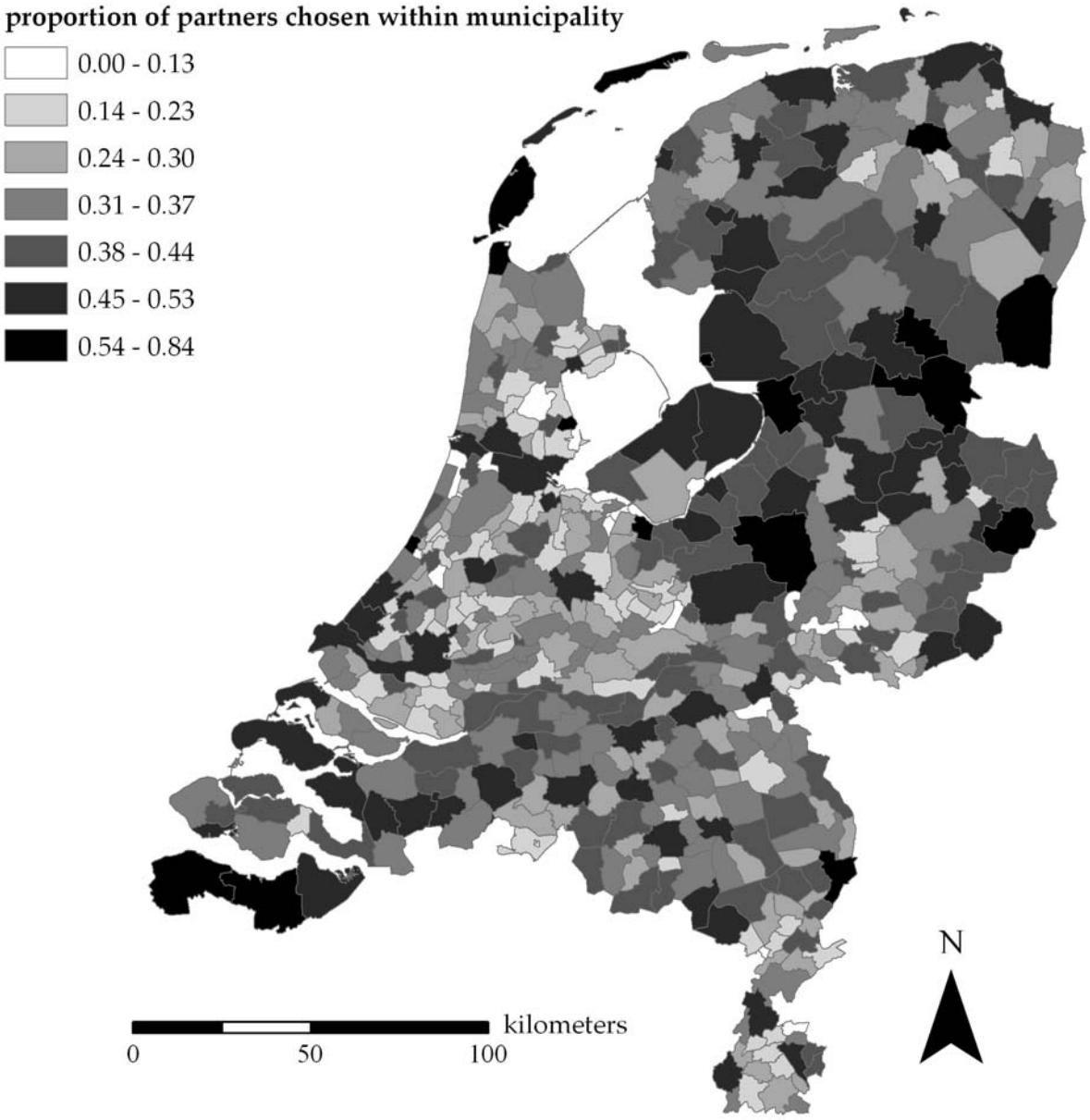
Figure 1 shows the regional variation in short distance homogamy in 2004. On average, a third of all persons that started cohabiting chose a partner from their own municipality; with regional variation ranging from 0 in the small municipality of Rozendaal to 84 percent in Urk. A cursory visual assessment demonstrates a pattern of high values in cities and large municipalities, in the north and east of the country and on the islands, and a clustering of low values in the western part of the country and in smaller municipalities.

Table 2 shows the coefficients of the weighted regression analysis. Regional variation in short distance homogamy is primarily governed by geographic determinants, as can be seen from the t-statistics in table 2. With increasing size of an area, and increasing degree of urbanisation, as measured by the surrounding address density, short distance homogamy increases. Moreover, living in border municipalities increases the probability of finding of partner within the same municipality. This is contrary to our expectations.

As expected, socio-economic determinants also matter in short distance homogamy. The higher the concentration of individuals with a low income, the higher the degree of short distance homogamy. At the other end of the spectrum, high educational level and especially high average income of people within an area lead to decreased short distance homogamy. Both are in line with our expectations.

[27] Corrected for degree of urbanisation, education and income.
[28] Corrected for education and income.

Figure 1. Map of short distance homogamy



The presence of potential partners, as measured by the proportion of 25 to 45-year-olds in an area, does not affect the probability of finding a partner in the same area. The set of cultural factors shows some mixed results. The strongest effect is found for classic individualism; the higher the score on this indicator, the lower the extent of spatial homogamy. Contrary to expectation, we find a positive effect for post-materialism. Areas with relatively high scores on Protestant conservatism tend to have higher levels of spatial homogamy, which is in accordance with our hypotheses. As far as the language indicators are concerned, only the Frisian area

shows significant results: in these areas partners are more often found within municipal borders.

Table 2. Weighted regression of short distance homogamy (N=483)

Variable	B	t-statistic	sign.*
Constant	-1.274	-3.43	***
Spatial			
Border municipality	0.146	2.59	**
Area of land (hectares/1,000)	0.026	8.94	**
Surrounding address density/ 1,000	0.313	8.00	****
Socioeconomic			
Proportion higher educated	-0.008	-2.90	***
Proportion lowest income group	0.067	4.49	****
Proportion highest income group	-0.035	-6.50	****
Demographic			
Proportion population aged 25-45 years	0.011	1.11	
Cultural			
Index for Protestant conservatism	0.056	2.70	***
Index for post-materialism	0.072	1.95	*
Index for classic individualism	-0.176	-3.91	****
Living in Frisian-speaking area	0.185	2.25	**
Living in Low Saxon-speaking area	0.016	0.34	
Living in Limburgish-speaking area	-0.074	-1.04	
Model statistics			
Adjusted R^2		0.51	****

* Levels of significance * 0.1 ** 0.05 *** 0.01 **** 0.001

4.4.2 Spatial heterogamy

Figure 2 shows the map of spatial heterogamy, as measured by the proportion of chosen partners in a municipality that were not living in the Netherlands the year before and who were also not born in the Netherlands. These values are much lower compared to short distance homogamy, with on average four percent of partners chosen from abroad. The spatial pattern reveals high levels of spatial heterogamy in the big cities and in the south. The northeast has relatively low values of spatial heterogamy.

Figure 2. Map of spatial heterogamy

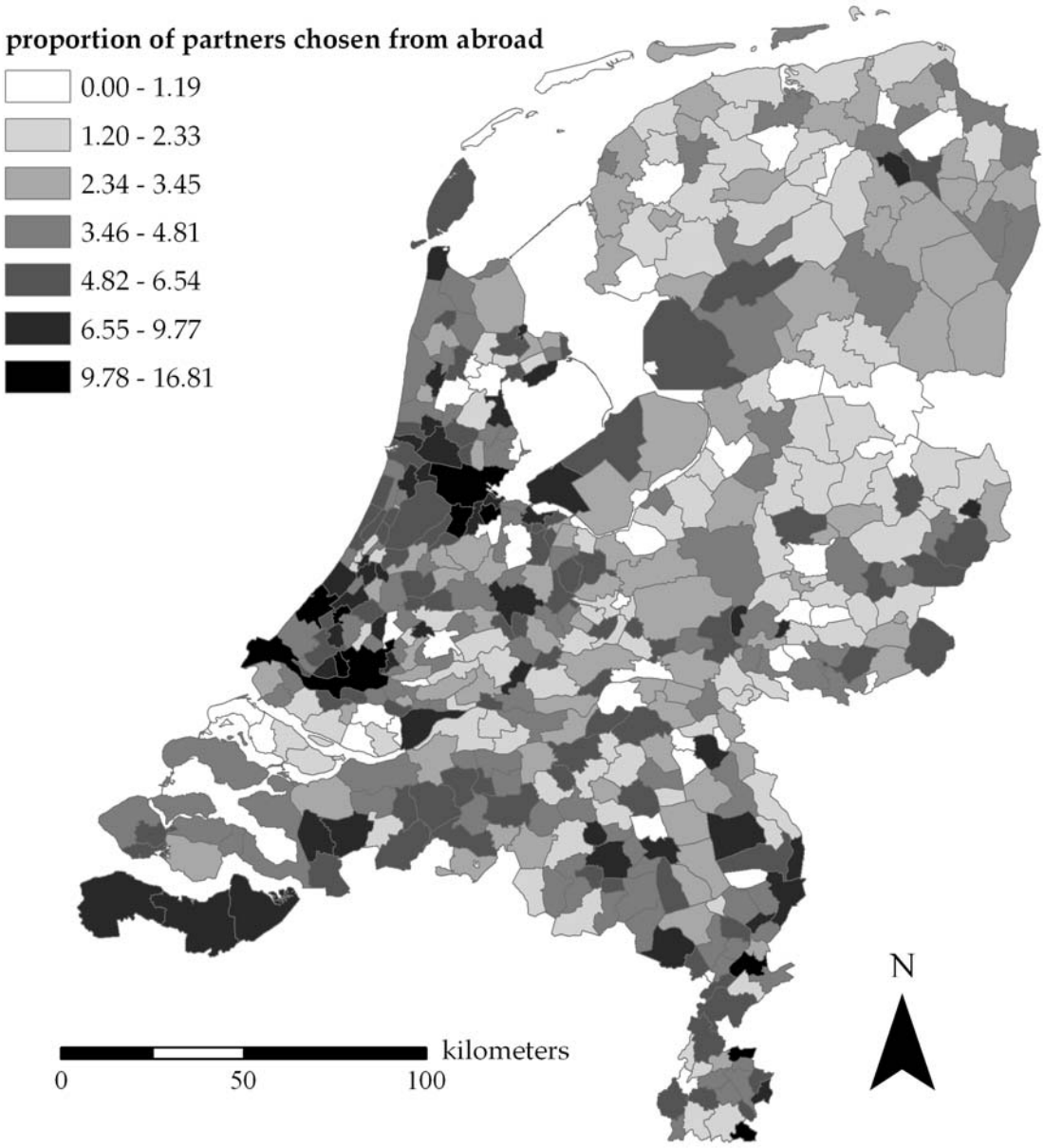


Table 3 shows the coefficients from the weighted regression analysis. Demographic indicators are by far the most important determinants of spatial heterogamy, judging by the t-statistics. The share of western immigrants in a municipality is the most pertinent explanatory factor for the proportion of inhabitants choosing a partner from abroad, closely followed by the proportion of Turks and Moroccans[29]. Not only is short distance homogamy greater in areas close to the border, spatial heterogamy is lower as well. Again, this is not in line with our expectations.

[29] Due to high correlation between the share of Turks and Moroccans and the degree of urbanisation, the latter variable was omitted from the analysis.

Table 3. Weighted regression of spatial heterogamy* (N=483)

Variable	B	t-statistic	sign.
Constant	-3.403	-12.08	****
Spatial			
Border municipality	-0.131	-1.71	*
Socioeconomic			
Proportion higher educated	-0.004	-1.10	
Proportion lowest income group	-0.023	-1.33	
Proportion highest income group	0.002	-0.38	
Demographic			
Proportion western descent	0.051	8.28	****
Proportion Turkish	0.107	7.00	****
Proportion Moroccan	0.086	4.75	****
Cultural			
Index for Protestant conservatism	-0.081	-3.02	***
Index for post-materialism	0.032	0.71	
Index for classic individualism	0.113	2.15	**
Living in Frisian-speaking area	-0.213	-1.93	*
Living in Low Saxon-speaking area	-0.298	-5.06	****
Living in Limburgish-speaking area	-0.098	-1.11	
Model statistics			
Adjusted R^2		0.47	****

* Levels of significance * 0.1 ** 0.05 *** 0.01 **** 0.001

Although higher social class-areas are characterized by partner choice at greater distances, we find no effect of socio-economic characteristics of the population in an area on the extent of spatial heterogamy.

In Protestant conservatist-areas, partners are not only found close by; spatial heterogamy is also much lower. As hypothesized, individualist areas are characterized by higher rates of spatial heterogamy, although no effect is found from post-materialism. Finally, in the Frisian and Low Saxon-speaking areas, partners tend not to be found abroad.

4.5 Discussion

The analysis of regional differences in short distance homogamy and spatial heterogamy evidences a variety of determinants of the spatial dimension of partner choice. While spatial variation in short distance homogamy is largely explained by geographical factors, demographic factors account for a majority of regional differences in spatial heterogamy. The greater the size of an area and the higher the degree of urbanisation, the more partners are found within the area. Living in an area bordering Germany or Belgium leads to a decrease in spatial heterogamy and an increase in spatial homogamy, which was unexpected. A national and in this case a linguistic border imposes a cultural barrier in terms of

partner choice, in spite of the presence of immigrants in these areas. Similarly, language evidently creates borders between groups with similar cultural characteristics, as in the Frisian-speaking area and especially so in the Low Saxon-speaking area, partners from abroad are avoided.

Socio-economic characteristics of inhabitants also have an effect on short distance homogamy and spatial heterogamy, thereby confirming previous work (Haandrikman et al. 2008b; 2009). In areas with concentrations of persons with low income, short distance homogamy tends to be more pronounced. The reasons might be related to limited means for travelling, combined with the local orientation of the lower social classes. In areas with high proportions of the higher educated, fewer partners are found within municipal borders, although the extent of spatial heterogamy is not higher in these areas.

Living in cities clearly influences the geographical origin of partners found. High address density and thus high concentrations of people, jobs, schools, and places of entertainment offer increased opportunities for interaction between individuals, causing higher rates of short distance homogamy, thereby confirming earlier findings (Haandrikman et al. 2008a) but contradicting another study (Haandrikman et al. 2009), where the exact geographical distance between partners was explained, but in which no other geographic variables were included.

On the other hand, the presence of relatively high numbers of people of different origins (especially in cities) increases the odds of finding a partner from abroad. This is in line with the study of Esveldt and Van Poppel (2005), who claim that modernisation enhances endogamy, because globalisation has increasingly enabled non-western groups to maintain regular contact with and to visit their country of origin. In addition, because of the changed attitude of native Dutch towards foreigners in general and Muslims in particular, the choice of a Turkish or Moroccan partner (who is usually Muslim) might be less attractive for natives, while Turks and Moroccans will be more inclined to choose their partner within their own group (Esveldt and Van Poppel 2005). In a qualitative study on marriage migration from Turkey and Morocco, WODC and INDIAC (2009) found that even within the country of origin, partners are preferred from the same village or town. After new legal and immigration measures to make marriage migration more difficult were introduced in 2004, marriage migration decreased, however, the proportion of Turks and Moroccans marrying within the ethnic group has remained the same, since more partners from the own ethnic group are found within the Netherlands (Statistics Netherlands 2008b).

Conversely, it has been argued that modernisation leads to a more open partner choice, in which geographical origin is no longer of importance (Beekink

et al. 1998; Van de Putte 2003). The broadening of ideological horizons affects the preferences for partners and the norms for partner choice. Indeed, in (Protestant) conservatist areas, short distance homogamy is the rule, while spatial heterogamy is avoided, while in areas characterized by individualists, partners from the same area are not preferred. However, short distance homogamy is found to be higher in post-materialist areas, which was unexpected and contrary to previous findings.

From this study it has become clear that regional cultural indicators partly account for patterns of short distance homogamy and spatial heterogamy, where culture is defined by nationality, language, religion and value orientations. The effect is strongest for Frisians, who not only prefer partners from the own municipality within the Frisian province, but also avoid partners from abroad. The spatial proximity of other cultural groups leads to an endogamous partner choice, which indicates higher levels of cohesion within the group, but decreasing openness to others. Culture, geography and socio-economic class determine the predominant spatial patterns of social contact, including the choice of a partner for life.

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5 WHERE DO PARTNERS MEET? SOCIAL DIFFERENTIATION IN MEETING PLACES[30]

ABSTRACT

Meeting places form a vital link in the process of partner choice, in which preferences, norms and opportunities to meet partners play a role. Using the 2003 Fertility and Family Survey (*Onderzoek Gezinsvorming*) for the Netherlands, we find that the partner market is segmented by relationship career, education, age, religion and geography. Public places are popular among youngsters, the lower educated, Catholics and the rural population. So-called 'closed' places are meeting places for the higher educated, partners in the repartnering market, young adults, the re-reformed and city dwellers. Those meeting in private settings tend to have a lower level of education, to be Muslim, and to have grown up abroad.

5.1 Introduction

Research has shown that partner choice follows regular patterns. Partner choice is the result of preferences for certain characteristics, social and cultural norms, and the opportunities for meeting partners (Kalmijn 1998). Meeting places are a central link in these determinants of partner choice.

In the past few centuries there have been major changes in partner choice, and therefore also in meeting places. Partner preferences have shifted from ascribed characteristics to achieved characteristics, church and neighbourhood have less influence on partner choice, and there are far more opportunities for meeting potential partners (Kalmijn 1991b; Van de Putte 2003). Sociologists relate changes

[30] This chapter is reprinted and translated from: Haandrikman, K. (2010), Waar ontmoeten partners elkaar? Sociale differentiatie in ontmoetingsplaatsen. *Mens en Maatschappij* 85 (2): 176-195.

in partner choice to modernization processes such as increased mobility and knowledge dissemination. Given that studies exist of meeting places in the 1960s and 1970s in the Netherlands, but little research has been done into where partners meet each other in recent times, the primary objective of this article is to gain insight into where partners meet, and whether this pattern has changed over time.

Class differences usually have a prominent role in research into changes in partner choice and meeting places. In an extensive study of changes in meeting places in France in the twentieth century, Bozon and Héran (1989) found that meeting places can be classified according to a social hierarchy. The higher the social class, the more closed the meeting place. The study found that there were differences between public, closed places (such as schools, workplaces and clubs) and private places. The original term 'lieux réservés' (Bozon and Héran 1988) is translated here as 'closed places'. The upper classes tend to meet their partner in closed places, while the lower classes more frequently find a partner in public places. In a recent study into meeting places in Britain, Lampard (2007) found that in the past few decades there has been a shift away from public places to closed places[31], whereby persons with a higher education more often find a partner in closed places. Based on these findings, the second objective of this article is to gain insight into the social differentiation in meeting places in the Netherlands. This will involve identifying not only the socioeconomic characteristics of partners, but also the demographic, sociocultural and spatial characteristics. The analysis is based on the 2003 Fertility and Family Survey (*Onderzoek Gezinsvorming*), hereafter FFS.

5.2 The role of meeting places in partner choice

Partner choice is the result of preferences relating to a partner and of social and cultural norms and opportunities for meeting people (Hendrickx et al. 1995; Kalmijn 1998; Van de Putte 2003). Explaining partner choice in terms of a combination of preferences, norms and opportunities is not new. In this context, Winch (1971) referred to the 'field of eligibles', the particular segment of the population from whom a person chooses a partner. Katz and Hill (1958) advocate a 'norm-interaction theory', and Kerckhoff (1964) explains the process of assortative mating by two factors: partner choice as a function of opportunities on the one hand and, on the other, similarity between partners as a consequence of the partners' preferences and of the influence of social sanctions.

Specific *preferences* for characteristics in a partner can mean that a partner is sought in specific places. Many studies have shown that people have a preference

[31] Lampard used the term 'select places' where we use 'closed places'.

for a partner that resembles them. For the Netherlands it was found that partners are often similar in terms of education, occupation, social background, religious denomination and cultural participation (De Hoog 1979; 1982; Hendrickx 1994; 1998; Smits 1996; Ultee and Luijck 1990; Uunk 1996; Uunk and Kalmijn 1996; Uunk and Ultee 1995; Van Tulder 1972). Similarity, or homogamy, is seen as attractive in relationships. Sharing the same values and opinions confirms each other's conduct and worldview, and having the same taste and knowledge is conducive to discussion (Kalmijn 1991a; 1998).

Cultural and social norms within groups may lead to partner choice within the group. The church, ethnic group, parents, friends or others in the environment can influence partner choice (Kalmijn 1998). In the case of certain religious groups (i.e. Catholics, Protestants and Jews) there has always been a high percentage of marriages within the group (Blau et al. 1982; Kalmijn 1991). For centuries, Catholic and certain Protestant denominations in particular have condemned marriages of mixed religion (Kalmijn 1998; Kok and Van Bavel 2006). Because, according to Kalmijn (1998), churches compete for members, and because there is a considerable risk of losing members who marry someone of another religion, religious institutions attempt to restrict mixed marriages. Up until the 1970s, religiously homogamous marriages were the norm in the Netherlands, but in the 1980s as well, a high percentage of all marriages were religiously homogamous. Over the course of time, as a result of greater individualism and autonomy, the cultural and social norms for choosing a partner within the group have weakened. Young people have much more individual freedom of choice, also in terms of partner choice. Today in the Netherlands there is a high level of religious homogamy among, in particular, re-reformed[32] denominations and among Moroccans and Turks, the majority of whom are Muslims (Esveldt and Van Poppel 2005; Hooghiemstra 2001).

It goes without saying that opportunities for meeting people play a crucial role in the process of choosing a partner. The geographical distribution of the population and meeting places determines the likelihood of meeting certain people. Partner choice is also influenced by the geographical clustering in terms of age group, level of education, social and ethnic background, and religion. The fact that people live in certain places, go to certain schools, and join certain institutions and organizations gives rise to local partner markets such as schools, neighbourhoods, clubs and other institutionalized and non-institutionalized settings (see for example Smeenk 1998). According to Kalmijn and Flap (2001), the

[32] In this article 'gereformeerd' is translated as 're-reformed' while 'Nederlands hervormd' is translated as 'Dutch reformed'. The Dutch reformed church pertains to the largest Dutch Protestant church.

social contexts within which people live their lives form the basis for the group of people from whom a partner is ultimately chosen. In turn, this assortative effect of meetings promotes homogamy.

In recent centuries, the opportunities for meeting a partner have increased considerably as a result of increased mobility, leisure time and the growth in mass communication methods. As a result of the increased participation of women in the labour market, there is less gender segregation in the workplace, so the opportunities for meeting a partner at work have increased. In addition, many more people go into higher education and, because there is a more equal gender distribution in that setting, there are more opportunities for meeting a partner while studying. The arrival of the internet also brought the possibility of searching for a partner in a very 'directed' way, using criteria ranging from signs of the zodiac and favourite brands to whether the person likes walks on the beach; in theory, the geographical horizon is unlimited. Given the changes in the process of partner choice described in this section, one might expect the frequency of meetings in closed places to increase, at the expense of meetings in public and private places.

The process by which a partner is ultimately selected from a group of candidates is described as 'filtering' (Kerckhoff and Davis 1962; Marsden 1990; Murstein 1986). An individual chooses a partner from a group of possible partners on the basis of preferences, usually based on other characteristics such as appearance and psychological characteristics, whereby complementarity rather than similarity is the determining factor (Winch 1971).

5.3 Previous research into places of meeting

Historical studies relating to the Netherlands have shown that, in the majority of cases, future partners usually met close to home, at local celebrations or through family, church or friends (De Hoog 1974; 1982; Douma 1975; Kok and Mandemakers 2005; Van Hessen 1964). According to De Hoog (1982), in the 1970s, half of future spouses met in a bar or dance venue. At the time of the first meeting, more than 40 percent of couples lived less than five kilometres from each other (De Hoog 1982). Van Poppel and Ekamper (2005) discovered a 'widening' in the partner market in Gouda in the period 1811-1980: there was a clear increase in the distance that partners lived from each other. Still today, the chance of meetings still decreases as distance increases; most people choose a partner who does not live far away (Haandrikman et al. 2008). Studies that regard a country as a single large marriage market ignore the fact that partner choice takes places within a limited geographical area (Laumann et al. 2004). According to Lichter et al. (1991), the possibilities for meeting a partner are influenced by the group of potential

partners, which in turn is determined by where one lives. Houston et al. (2005) indicate why the geography of meeting places is important, but little research has been carried out. The most important publications in this context are those of Bozon and Héran (1987; 1988; 1989), in which meeting places in France in the twentieth century are studied, and which show that the spatial segregation of different social classes leads to a parallel segregation of their meeting places, which in turn leads to homogamy.

Bozon and Héran (1989) found a correlation between meeting places and 'social space', and drew up a classification of meeting places according to a social hierarchy. The higher the social class, the more closed (or 'select') the meeting place. Three types of meeting place can be distinguished, based on the degree of access to meeting places. *Public* meeting places, where the lower social classes often meet, are characterized by open admission to everyone. Examples are public places and public leisure places (bars, parks, shopping centres, public transport, etc.). Admission to *closed* places (e.g. clubs, workplaces and schools) is limited. Admission is granted on the basis of cooptation, codes of conduct or certain conditions that potential participants must fulfil. Finally, there are *private* places, such as the circle of family or friends. Bozon and Héran (1989) observed that the upper classes often meet their marriage partner in closed or private places. Lampard (2007) found that, in Britain as well, highly educated people increasingly tend to meet their partner in closed places. However, persons from the upper as well as the lower classes also meet their partner in private places.

In France since the 1960s, there has been an increase in the number of couples meeting in public places and among friends, while the number of meetings at family gatherings fell, and the number of couples meeting at a place of work or study remained stable (Bozon and Héran 1989). In England, Lampard (2007) found a trend towards meeting at places of education and work, rather than in places for 'drinking, eating and socializing' (p.363).

5.4 Partner characteristics and meeting places

On the basis of the research findings, in this section we will formulate hypotheses about partner characteristics and meeting places. Table 1 is a schematic representation of the hypotheses. As an example of how to interpret the table: the minus sign by 'Higher age on meeting' and 'Public setting' indicates the expectation that, as age increases, people are less likely to meet a partner in a public place.

Table 1. Hypotheses about the social differentiation of meeting places*

	Public place	Closed place	Private place
Met partner recently	-	+	-
Demographic characteristics			
Higher age on meeting	-	0	0
Has previously had a serious relationship	-	+	-
Socioeconomic characteristics			
Higher social class	-	+	-
Sociocultural characteristics			
Catholic	+	-	-
Re-reformed	-	+	+
Muslim	-	-	+
Spatial characteristics			
Grew up in a town	-	+	0
Grew up outside the Netherlands	-	-	+

* The symbols have the following meanings: + positive correlation, - negative correlation, 0 no correlation.

5.4.1 Demographic characteristics

In the 1970s it became apparent that many married couples in the Netherlands who had known each other since a young age had met each other in the local area (De Hoog 1982). According to De Hoog (2005), people who search for a partner at a higher age tend not to do so in institutional meeting places such as bars, but more often through contact advertisements and introduction agencies. De Graaf and Kalmijn (2003) studied the partner market among people who have already been married, the 'repartnering market' or 'second marriage market'. Within this group there is a greater tendency to meet a partner through a dating agency or contact advertisements than in an educational setting.

With regard to demographic characteristics, we therefore expect there to be different marriage markets. Young people will tend to meet a partner in a public or educational setting, and older people will rather tend to do so at work or through an agency. The combination of a positive and negative correlation for closed places will therefore lead to no correlation. In the case of people who have already had a serious relationship, we expect a higher tendency to meet in closed places (mainly through work or agencies) rather than in educational places, public or private places.

5.4.2 Socioeconomic characteristics

As in France, historical studies in the Netherlands have found that the upper classes tended to meet their partner at parties, balls and family visits (Van Hessen 1964), and tended to choose a partner who did not live close by (Van Poppel and

Ekamper 2005). On that basis, the expectation is that members of the upper classes will tend to meet a partner in closed places, and that people in the lower classes are more likely to meet their future partner in public or private places.

5.4.3 Sociocultural characteristics

Religion also plays a role. Research by De Hoog (1982) shows that re-reformed denominations tend to find a partner at the parental home. According to Kalmijn and Flap (2001), the re-reformed are more likely to meet each other through church associations and in educational places. In reformational circles, educational institutions play an important role in terms of passing on values. This promotes social cohesion within the group and reinforces the group identity (Braster 2001). Many Muslims find their marriage partner through arranged marriage or family connections (Hooghiemstra 2003). In the 1970s, Roman Catholic men tended to meet their future wife at a bar or dance venue. According to De Hoog (1982), the high percentage of meetings in bars is to do with the social role of the 'café' in the Catholic south, and many meetings were in the context of Carnival celebrations.

Based on the above, we expect the following differences in meeting places distinguished by the sociocultural characteristics of partners. We expect that the majority of Catholics find their partner in public places, while re-reformed are more likely to meet their partner in private and closed places such as churches, educational places and clubs or organizations, since this group are regular churchgoers and have many organizations of their own. For Muslims, the expectation is that they will meet a partner in private places, primarily through family and acquaintances.

5.4.4 Spatial characteristics

Bozon and Héran (1987) found substantial regional differences in France. Meetings at a 'ball' occurred mainly in rural areas in the north, east and in the mainly rural and agricultural south west. Meetings through the family were much more common in the west. In the course of the twentieth century, city dwellers tended to meet partners through work, at closed parties, when socializing or on holiday. People in rural areas were more likely to meet a partner at village events and family celebrations. Regional differences were found in England as well (Lampard 2007). In London, meetings in private places were much more common than in the north, even allowing for the degree of urbanization and socioeconomic differences, while meetings in closed places were most frequent in southern England. According to Lampard (2007), these patterns are the result of regional differences in cultural norms for locations deemed suitable for meeting a partner,

differences in the tendency towards membership of local organizations and involvement in informal communities.

In terms of spatial differences, therefore, we expect that people in rural areas will tend to meet their partner in public places, since there are fewer closed places in those areas. Also because educational institutions and jobs are concentrated in towns and cities, people living in an urban area at the age when they choose a partner will have a greater chance of meeting a partner in a closed setting. In the case of people who grew up outside the Netherlands, the expectation is that they are more likely to meet a partner in a private setting. A majority of the people in this category will have emigrated for reasons relating to union formation. Some of these migrant groups come from non-Western countries, where marriage partners are often found within family networks.

5.5 Data and methods

The data for this research come from the 2003 FFS, published by Statistics Netherlands. The purpose of the FFS is to gather information about relationships, family formation and their backgrounds. In the period February to June 2003, 3,900 men and 4,200 women between 18 and 62 years of age were interviewed. The random sample was selected from the inhabitants registered in the Dutch municipalities on 1 January 2002, who were born between 1940 and 1984. Of the group of non-respondents (43 percent), 58 percent declined to be interviewed, 18 percent were not at home, and the 'other' category amounted to 23 percent. The sample was reviewed at individual level in order to adjust it for the composition of the non-respondent group.

People currently in a permanent relationship (83 percent of those interviewed) were asked 'How or where did you meet your current partner?', enabling an analysis to be made on the basis of meeting places. Respondents could choose from 10 categories: through work, an educational setting, a club or association (sports/hobby/church, etc.), through a dating agency or contact advertisement, via the internet, while socializing, on holiday or in a recreational setting, through parental mediation, arranged marriage, through friends/acquaintances/neighbours, or 'other'. These meeting places were then categorized according to the typology of Bozon and Héran (1989). 'Closed' places are educational settings, work settings, clubs/associations, dating agencies and contact advertisements, and the internet. 'Public' places are socializing places, holiday and recreational situations, and 'private' places are through family/acquaintances/neighbours and parental mediation. The category 'somewhere else' is for any other places.

In the case of people living with a partner on a long-term basis (90 percent of respondents in a permanent relationship), it is known when they moved in with or

married their current partner, and how long they had been in the relationship before marrying or cohabiting. This makes it possible to calculate, in the case of people currently living with a partner, when they met the partner, and to make a comparison in terms of time. For the purpose of this article, only heterosexual couples sharing a home (99 percent of all marital and cohabitational relationships) will be considered. Unfortunately it is not possible to make a comparison with broken relationships, since we only know where the interviewees met their *current* partner.

Based on the theoretical framework, variables were selected that were likely to influence where people meet a partner. The first variable is the period in which people met their partner. With regard to *demographic* characteristics, gender and age on meeting were determined. Relationship history is operationalized as 'has or has not previously lived with a cohabitee/spouse'.

Socioeconomic status was operationalized by taking the highest level of educational attainment, including the respondent's current studies, if any. The 'lower' level of education is primary education[33]. 'Higher education' is HBO (higher vocational education at universities of applies sciences) or university, and the remainder are in the category 'secondary education'.

The respondent's *sociocultural* characteristic is the mother's religious denomination – not the respondent's – because religion may have partly determined the choice of school and clubs/associations, and because a partnership increases the likelihood of a change of religion (Need and De Graaf 1996). The following categories apply: Catholic, re-reformed (Gereformeerde Bond, Gereformeerde Kerk and other Reformed denominations), Dutch Reformed, Muslim and 'Other' (Hindu, Humanist Society) or 'no religion'.

Spatial characteristics relate to the place where people grew up. A variable is included to indicate whether people grew up in the countryside, in a village or small town, or in a large town/city. Another variable indicates whether respondents grew up in the Netherlands or another country, taking the area in which the respondent lived for the longest amount of time between the ages of 6 and 16.

Descriptive analyses were carried out first in order to establish where and how people meet their partner, and how this has changed over time. A multinomial logistic regression model was then used to establish to what extent individual partner characteristics influence the likelihood of meeting a partner in a particular setting.

[33] Primary education up to the age of 12.

5.6 Results

5.6.1 Meeting places: changes over time

Table 2 shows that by far the largest group of people (45 percent) met each other while socializing, on holiday or in a recreational setting. Approximately 13 percent met through friends, acquaintances or neighbours. Eleven percent met at work, 11 percent met at a club or association (sports, hobby, church, politics, youth, etc.), eight percent knew each other from an educational setting, and approximately six percent met their partner through family. Less than half a percent indicated that they had met their partner via the internet. If the meeting places are categorized according to Bozon and Héran's typology (1989), we see that 45 percent of respondents met their partner in a public setting, 31 percent in a closed setting, and 19 percent in a private setting. Five percent of respondents met their partner in a setting categorized as 'Other'.

Table 2: Meeting places: changes over time

	Period in which respondent met partner			
%	Before 1980	1980s	1990s onwards	Whole period
Through work	8	9	16	11
Educational setting	7	9	7	8
At a club, association, etc.	12	11	9	11
Introduction agency/contact advertisement	0	1	1	1
Internet	0	0	1	0
Total for closed places	*28*	*31*	*35*	*31*
Socializing/holiday/recreation	51	45	39	45
Total for public places	*51*	*45*	*39*	*45*
Through family	6	5	5	6
Through friends/acquaintances/ neighbours	10	14	15	13
Parental mediation/arranged marriage	0	1	1	1
Total for private places	*17*	*20*	*21*	*19*
Somewhere else	5	5	5	5
Total for 'other'	*5*	*5*	*5*	*5*
Total for all places	100	100	100	100
Total *n*	2,498	1,546	1,932	5,997

In the past few decades there has been an increase in the number of people who met their partner at work, namely from eight percent of people who met before the 1980s, to nine percent of people who met during the 1980s, and to 16 percent of respondents who met in the period from the 1990s to 2003. This increase was as expected, given the increased participation of women in the labour market.

Although we expected the increased participation in education to result in more meetings in educational places, this was not the case. Furthermore, as in France, the number of respondents who met their partner through friends or acquaintances increased. The increase in the Netherlands was from 10 to 15 percent. By contrast, there was a notable decrease in the number of meetings during holidays (from 51 to 39 percent) and a slight decrease in the number of meetings through clubs and associations (from 12 to nine percent). Meetings via internet have occurred only in the most recent period, but this is still a very small percentage. It could be the case that an increasing number of people meet each other through the internet, without this leading to a long-term relationship.

These changes mean a strong increase in the number of meetings in closed places, a slight increase in meetings in private places, and a decrease in the case of public places. These findings correspond to Lampard's (2007) findings for England, but not to those of Bozon and Héran (1989) for France, where there was an increase in meetings in public places.

5.6.2 Social differentiation in places of meeting

Table 3 shows the odds ratios of people meeting a partner in a public, private or other environment in relation to a closed setting. The likelihood of meeting a partner in a closed setting has increased. In the 1970s, fewer people met their partner in private and other places, and from 1980 onwards there was a decrease in the number of people meeting their partner in public and other places. This confirmed the picture obtained from the bivariate analysis.

The analysis shows that meeting places are socially differentiated. In the repartnering market, people tend to meet a partner in closed places rather than public places, and in particular at work (in no less than one-fifth of cases), via the internet and dating agencies. Only one-third of the people in this group met their partner in a public setting. We see a similar situation in the 20-35 age group: fewer meetings in public places and more meetings in closed places, mainly at work. These outcomes are in line with our expectations and partly in line with the results of the study by Kalmijn and Flap (2001), who found that people marrying at a later age had often shared the same work setting.

Those with a higher education tend to have met their partner in a closed setting, and in far fewer cases in 'other' places. This finding is in line with other studies and appears plausible, given the fact that people in this group spend longer in education and have a higher rate of participation in the labour market.

Table 3. Odds ratios of a multinomial logistic regression of meetings in public, private and other places in relation to closed places

Place of meeting (reference category = closed places)		Public places		Private places		Other places	
Period of meeting	<1970 (reference category)	1.00		1.00		1.00	
	1970-1979	0.92		0.81	*	0.57	***
	1980-1989	0.83	*	0.89		0.68	**
	>1990	0.78	**	0.81		0.67	**
Demographic characteristics							
Age on meeting partner	<20 yrs (ref.cat)	1.00		1.00		1.00	
	20-35 yrs	0.87	*	1.16		1.02	
	> 35 yrs	0.76		1.02		1.45	
Relationship history	Has lived with a partner before	0.62	****	0.97		1.03	
	Has not lived with a partner before (ref.cat.)	1.00		1.00		1.00	
Sex	Female	0.92		1.02		1.18	
	Male (ref.cat.)	1.00		1.00		1.00	
Socioeconomic characteristics							
Level of education	Lower	1.34	**	1.79	****	2.23	***
	Middle (ref.cat.)	1.00		1.00		1.00	
	Higher	0.44	****	0.58	****	0.57	***
Sociocultural characteristics							
Mother's religious denomination	Catholic	1.49	****	1.01		0.84	
	Re-reformed	0.58	****	0.77	*	0.68	*
	Dutch Reformed	1.13		0.97		0.78	
	Muslim	1.04		4.02	****	1.11	
	Other/no denomination (ref.cat.)	1.00		1.00		1.00	
Spatial characteristics							
Grew up	outside the Netherlands	0.94		1.98	****	1.30	
	in the Netherlands (ref.cat.)	1.00		1.00		1.00	
Grew up in	a city	0.56	****	0.97		0.94	
	the countryside, in a village or small town (ref.cat)	1.00		1.00		1.00	
n of subgroup		2701		1115		301	
Total n							5,945
Nagelkerke's R^2							0.13
Model chi-square				719.98**** (45 degrees of freedom)			

* = p<0.1; ** = p<0.05; *** = p<0.01; **** = p<0.001.

The places categorized as 'closed' in this study are educational places, work, clubs/associations, the internet and dating agencies. Table 4 shows the closed places in which people with a higher education meet each other. Before the 1970s, meetings through clubs and associations accounted for a very large proportion of all meetings in closed places, but this figure decreased from the 1970s onwards and remained low. From that period on, people with a higher education tended to meet their partner in the work setting, and from the 1990s onwards, the number of meetings in an educational setting decreased. According to Kalmijn and Flap (2001), meetings in the work setting promote homogamy based on social class. For people with a higher education, therefore, it is clearly a case of 'like will to like', and an increasing tendency to meet their partner at work, which leads to greater selectivity in the partner market.

Table 4. Met partner in a closed place - respondents with a higher education (n=699)

%	1945-1969	1970-1979	1980-1989	1990-2003
Through work	17	30	26	37
Educational setting	43	41	44	31
At a club, association, etc.	40	29	28	26
Introduction agency/contact advertisement	0	0	2	4
Internet	0	0	0	2
	100	100	100	100

Those with a lower level of education tend to meet their future partner in public, private or other places rather than in closed places. These outcomes are also in line with the expectations, and partly in line with the findings of Lampard (2007) and Bozon and Héran (1989), who found that the lower social classes most often met their partner in public places.

As expected, (children of) Catholics are more likely to meet a partner in a public setting such as a café, while those of the re-reformed denominations tend to meet their partner in closed places and less frequently in any other setting. This confirms the hypothesis that the re-reformed tend to meet their partner through re-reformed organizations and in educational settings. These places serve as local partner markets, where like-minded people meet. Moreover, the findings are in line with those of Kalmijn and Flap (2001), who observed that 're-reformed protestants succeed in decreasing meetings of their offspring in the open field by providing shared places to their own group' (p. 1301). People of re-reformed denominations do not, as expected, tend to find a partner in private places. Muslims, on the other hand, are four times more likely to meet a partner in a

private setting than in a closed setting. This group has a deviating pattern of partner choice whereby partners are found through family, friends, parental mediation and arranged marriages.

With regard to the spatial dimension, we see that persons growing up outside the Netherlands are almost twice as likely to meet a partner in a private setting than in a closed setting. This is in line with the expectations, as is the finding that persons growing up in a city are more likely to meet a partner in a closed setting than a public setting. This is probably due to the presence of job opportunities and educational institutions, although many people who live in rural areas work or study in the city.

5.7 Discussion

Most people in the Netherlands meet their partner in a public setting. One-third meet their partner in a closed setting, and one-fifth in a private setting. In recent decades, the number of meetings in closed places has risen sharply; there was a slight increase in the number of meetings in private places and a sharp decrease in the number of meetings in public places.

Potential partners with similar backgrounds meet each other in various partner markets, segmented by demographic, socioeconomic, sociocultural and spatial characteristics. The picture regarding the different places of meeting that emerges from the analysis is as follows. Partners who meet each other in *public places* tend to be young, Catholic, have a lower level of education, and have grown up in the countryside. This is the largest group among those that are looking for a partner. A slightly smaller but increasing number of people meet their partner in *closed places*. The characteristics of this group are as follows: young adult, higher education, partners in the repartnering market, of re-reformed denominations, have grown up in a city. By contrast, those who meet their partner in *private places* tend to be Muslims, have a lower level of education and have grown up outside the Netherlands more often. The composition of this group is probably fairly diverse; some of this group marry a partner from their country of birth, usually through family mediation or arranged marriage.

Although class differences are less pronounced than in the past, this research shows that the different social classes still tend to meet each other in particular types of setting. The upper classes meet each other in closed places, as was also found in the historical studies by Van Hessen (1964), De Hoog (1974) and Van Poppel and Ekamper (2005). Social class is no longer defined in terms of the profession of the person seeking a partner (or usually the profession of his/her parents), but in terms of the individual's education. The increase in the number of people who meet their partner in a closed setting can be seen in terms of the

partner market becoming increasingly closed. According to modernization theory, however, social openness increases over time. The individual's horizons are broadened and there is greater autonomy due to a combination of increased participation in education and increased wealth, assertiveness, knowledge dissemination, and social and spatial mobility (De Hoog 2005; Hendrickx 1994). Beekink et al. (1998) assert that a logical consequence of this is a decreasing preference for a partner from one's own group. The upper classes in particular are less guided by family, neighbourhood or church in their choice of partner. A shift is taking place in partner preferences, in particular away from ascribed characteristics such as social class and geographic background towards achieved characteristics such as education and occupation (Van de Putte 2003). Nevertheless, according to Van de Putte (2003), in studies of homogamy not much evidence of increased social openness has been found. Esveldt and Van Poppel (2005) suggest that modernization could even lead to increased endogamy. The tendency towards globalization means that Turks and Moroccans in the Netherlands can maintain contacts with their country of birth and therefore have the opportunity to find a partner there.

The decline in the number of people who meet their partner in a public setting could be due to the increase in the number of people with a higher education, a group that increasingly tends to meet their partner in a work setting. Fairs and neighbourhood celebrations have been replaced by bars and clubs, while parties and balls have been replaced by work places and educational places. Furthermore, more and more social encounters take place without a specific reason, while people from previous generations met each other at 'institutionalized meetings of the sexes', where it was only possible to meet on certain dates and occasions (De Hoog 1982). The typically institutionalized meeting places (e.g. educational places) play a role mainly in the first-partner market and much less in the repartnering market, in line with the findings of De Graaf and Kalmijn (2003) and De Hoog (2005).

Although the process of partner choice in the Netherlands has many similarities with the processes in France and Britain, a number of findings are typically Dutch. Despite 'depillarization' (*ontzuiling*) and the growth of a secular society, religious denomination still plays a role in partner choice. The school system is still largely structured as it was in the period of 'pillarization' (*verzuiling*), whereby non-denominational schools are separate from schools where teaching is based on a religion or ideology. This means that schoolchildren spend a considerable part of their life in an environment that is homogeneous in terms of faith or ideology, which increases the likelihood of a religiously homogamous relationship. Catholics, Muslims and the re-reformed meet their partners within

their own marriage market. In the case of the latter two groups, this could point to a combination of a strong preference for a partner of the same religion and a strong influence from the social and cultural context on the place of meeting as well as the choice of partner. By influencing where its members meet each other, the group preserves its integrity and therefore its identity.

The limitations of this study relate to the population studied and the structure of the Fertility and Family Survey. The question 'How and where did you meet your partner?' was put only to people living together with a partner. The interviewees were not asked where they met previous partners, so no comparison could be made with broken relationships. Unfortunately, the categorization of meeting places means that it is not possible to study meetings in the neighbourhood, through the church or during a holiday. For the purpose of the research it would also have been useful to know the physical location of the meeting places, since recent research has shown that people living with a partner tend to have met him/her close to home (Haandrikman et al. 2008). Moreover, we must point out that the survey question 'How or where did you meet your partner?' can be interpreted in different ways, and that in a number of cases it will have been difficult to name only one place of meeting. The decision to use the meeting-place typology of Bozon en Héran (1989) meant that the categories in the FFS had to be put into one of the four types of meeting place. Given that the meeting place 'holiday' was placed under 'socializing and recreation', in this case it was regarded as a public setting although, in certain cases, 'holiday' can be seen as a closed setting as well.

This article has shown that spatial use is socially differentiated. Different groups of people go to different places and meet potential partners there. The segmented way in which the partner market functions is created by the partners who operate in it because, motivated by preferences and restricted by group norms, they live their lives in certain places and among certain people. The present study cannot answer the question of how a partner is chosen from the group of potential partners. Further research is necessary into the decision process that leads to the partner choice: how are certain preferences weighed up, where do people go to meet a partner, and how does their environment influence their choice of partner?

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6 EXPLAINING THE FLIGHT OF CUPID'S ARROW: A SPATIAL RANDOM UTILITY MODEL OF PARTNER CHOICE[34]

ABSTRACT

Spatial homogamy may be defined as: anyone may be attracted to anyone else, but near candidates are more attractive than distant candidates. In this article we propose a model of partner choice, where homogamy is defined in terms of spatial, demographic, socioeconomic and cultural similarity. A spatial choice model using random utility theory is formulated, taking into account a relaxation of the independence from the irrelevant alternatives property, as spatial alternatives are not independent of one another. We model partner choice given the characteristics of the chosen partner and a choice set of alternatives, using unique micro data on all new cohabiters in the Netherlands, linked to other relevant data sets. The model takes the spatial locations of potential candidates within a choice set into account, including an indicator for the spatial similarity between alternatives. Spatial homogamy increases the odds of a partner match, even when controlling for other kinds of homogamy. The distance effect is most pronounced for those individuals with lower levels of education and those living in rural areas. Another new finding is that cultural homogamy appears to be an incentive for partnering, besides socioeconomic, demographic and spatial homogamy.

[34] This chapter is reprinted from: Haandrikman, K. and Van Wissen, L.J.G., Explaining the flight of Cupid's arrow: a spatial random utility model of partner choice, and has been submitted to an international journal.

6.1 Introduction

Studies on assortative mating have established that around the world, individuals tend to look for a partner with similar characteristics. Homogamy, or the similarity between marriage or cohabitation partners, has mostly been studied from a sociological perspective, examining the socioeconomic and cultural dimensions of homogamy (e.g. Hendrickx 1994; Kalmijn 1994; 1998; Schwartz and Mare 2005; Uunk 1996). Geographers have added the spatial dimension to this concept (Clegg et al. 1998; Coleman 1979; Coleman and Haskey 1986; Duncan and Smith 2002; Fisher 1980; Küchemann et al. 1974; Mayfield 1972), since in many of the homogamy studies, it is implicit that potential partners tend to live nearby.

Tobler (1970) stated in his general law of geography that everything is related to everything else, but near things are more related than distant things. Applied to partner choice: any one person may be attracted to any other, but near candidates are more attractive than distant candidates. We call this spatial homogamy.

The extent to which similar partners are chosen is mostly studied in terms of one or two characteristics only. We propose a model of partner choice where homogamy is defined in terms of demographic, socioeconomic, cultural and spatial similarity. The strength of this study is that all homogamy indicators are modeled simultaneously, as to uncover their relative contributions to partner matching. We formulate a spatial choice model using random utility theory, taking into account a relaxation of the Independence from Irrelevant Alternatives property (IIA) (Pellegrini and Fotheringham 2002). The model considers the chosen partner compared to alternative partners, based on their characteristics. We use unique geo-coded micro data on all new cohabiters in the Netherlands in the year 2004, based on population register data and linked to educational and socioeconomic data sources.

The next section presents the theoretical background of partner choice and the different types of homogamy. Subsequently, the spatial choice model of partner choice is formulated, after which the data and operationalization are described. The results are followed by the formulation of the conclusions.

6.2 Theoretical background

Partner choice is generally assumed to be resulting from three factors: preferences for certain characteristics in a partner, opportunities or constraints to meet a partner, and the social and cultural norms influencing partner choice (Kalmijn 1991; Van de Putte 2003). Studies on partner preferences have shown that people prefer to marry similar partners. Social and cultural control by parents, family, peers, neighbors, colleagues and the church, and the sanctions that may be imposed when partners are chosen outside a group, also influence the process of

mate selection. Lastly, structural limitations such as meeting opportunities and the spatial distribution of the number of available partners with specific characteristics influence the probability of partners selecting each other.

There are a number of basic characteristics that have been found to be of key importance in partner choice, which reflect common backgrounds. First, *spatial homogamy* may be defined as the similarity concerning geographical origin (Haandrikman et al. 2008a). Relationships tend to be spatially homogamous (Clegg et al. 1998; Coleman 1979; Coleman and Haskey 1986; Duncan and Smith 2002; Fisher 1980; Haandrikman et al. 2008a; Küchemann et al. 1974; Mayfield 1972). In the Netherlands, half of all new cohabiters find their partner within a 6-kilometer distance (Haandrikman et al. 2008a). Again, preferences, norms and opportunities are involved. According to Van Poppel and Ekamper (2005), a preference for cultural similarity indicates an inclination towards a person from the same or a related region, given the often shared language, religion and family values. Even social and cultural norms may lead to spatial homogamy, as social and cultural groups are often geographically clustered, and might thus lead to partner choice within an area. Opportunities for social interaction obviously relate to spatial homogamy, as proximity increases the likelihood of spontaneous encounters: the opportunities to meet potential partners are subject to strong distance decay. The opportunity to meet partners at greater distances is further reduced by the time, energy and costs that are still involved in bridging distance. Besides, physical barriers such as water masses or mountain ranges may impede social interaction. Moreover, the spatial pattern of potential candidates with certain characteristics, such as age, religion and socioeconomic status influences the distance to partners. Local marriage markets such as schools, workplaces and voluntary associations, attract a selected group of potential partners (Haandrikman 2010), and are also spatially organized. Together, these factors increase the likelihood of spatially homogamous relationships.

Second, *demographic homogamy* has been found among partners. Age and life stage are important elements of one's identity. The life course is structured; it consists of a succession of socially constructed stages. Transitions to a different stage in the life course can represent socially significant changes in people's lives (Dykstra and Van Wissen 1999). People prefer partners who are in similar life stages; wide age differences between partners are not very common (De Graaf et al. 2003; Van Poppel et al. 2001). Dutch-born men are on average about two years older than their partner (De Valk et al. 2001). Especially, relationships in which the woman is older than the man can lead to marriage instability (Janssen et al. 1999). Stage in the life course as indicated by place in the household and marital status is another probable key demographic characteristic influencing partner choice. From

the sociological literature it is known that the extent of social networks declines over the life course (Kalmijn 2001), especially after union formation. At the stage before cohabitation or marriage, less is known about characteristics of friends or partners. However it seems plausible that those in the same life stage, such as those living alone or individuals living with their parents, interact more with each other, as it has been found that marital status categories serve as boundaries in social networks (Kalmijn and Vermunt 2007). Demographic homogamy should be interpreted in terms of preferences, norms and opportunities, as elaborately described by Van Poppel et al. (2001). A similar life stage may imply a similar lifestyle, which increases the likelihood of matching. Social and cultural sanctions may arise in the case of large age differences, and local marriage markets tend to be segregated by age (Haandrikman 2010). In an extreme case, those looking for partners may be confronted by a shortage of partners their age because of variations in birth numbers; a phenomenon known as the 'marriage squeeze' (Ni Bhrolcháin 2001).

Third, *socioeconomic homogamy* is one of the most common types of homogamy. Partners have been found to be similar in terms of educational level, income, occupation and social class (Haandrikman et al. 2008b; Kalmijn 1991; 1998; Mare 1991; Schwartz and Mare 2005; Smits 1996; Uunk 1996). There is a long tradition in economic theories of marriage, with Becker (1973; 1981) as the most prominent scholar. Becker (1973) argued that people mate assortatively because each person marries when his or her utility level can be increased. As individuals are looking for the best mate, they compete with each other in the marriage market. The added value of marriage, compared to staying single, depends on income, human capital (for instance education or beauty) and the relative difference in wages of men and women. Becker (1981) stated that an efficient marriage market usually results in assortative mating and leads to a maximization of the aggregate output of household production. Individuals thus maximize their utility by looking for a partner with the most attractive economic resources, as they function as an indicator of the financial prospects, prestige, but also of the norms, values and tastes a person will develop during life (Kalmijn 1994). Secondly, the opportunities to meet partners of the same socioeconomic status also influence socioeconomic homogamy. In the Netherlands, the higher educated more often meet partners in select places such as schools, the workplace and voluntary associations, while the lower educated more often meet in public and private places, for instance at places of entertainment and through friends and family (Haandrikman 2010).

Cultural homogamy may be defined as the similarity of partners regarding cultural resources, such as values and behavior, political attitudes, life style, language and world view. As cultural resources are a key element in interaction,

cultural similarity has a strong effect on affection and social confirmation, as it leads to mutual understanding because of confirmation of each other's behavior and world views, and creates a basis for conversation (Kalmijn 1994). Clearly, social and cultural norms may arise when partners are chosen outside the group, especially when the group is defined by religion (Kalmijn 1998; Kok and Van Bavel 2006). As cultural groups tend to be spatially clustered (especially regarding language and religion), cultural homogamy is influenced by the opportunities to meet similar partners.

Given that language is a key component of communication, linguistic heterogamy may seriously obstruct mutual understanding (Kalmijn 1994; Stevens and Schoen 1988). According to Trudgill (1983) language can act as a defining characteristic of ethnic group membership. Cultural identification might also take shape by religion. In the Netherlands, partners tend to be found within their religious group or denomination (Hendrickx 1994), with the orthodox Protestants, besides Jews, being the most inclined to marry within the group (Kalmijn et al. 2005). While religious endogamy of Catholics and re-reformed Protestants has declined since the 1930s, an upheaval was experienced in the 1980s (Hendrickx 1998). In spite of the ongoing secularization, some religious groups still have a marked influence on demographic behavior, through the shaping of attitudes concerning family matters. Janssen et al. (1999) found that in the Netherlands, mixed marriages in terms of denomination have higher divorce risks than homogamous marriages. A recent study revealed particularly short geographic distances between partners in the Dutch Bible belt (Haandrikman et al. 2009). According to Kalmijn et al. (2005), differences between the reformed and orthodox are primarily characterized by social divides and not so much by differences in value orientations. Indeed, Haandrikman (2010) found that different religious groups meet partners in different places. Political attitude is another cultural resource that is of importance in partner choice. Lampard (1997) found that the vast majority of British couples identifies with the same political party, explained by a combination of individual choice (related to maximization of utility of marriage), demographic constraints (people move in homogeneous social circles), and responses to cultural pressures.

6.3 Model formulation

The marriage market can be studied by looking at how equilibrium sorting in this market takes place. People looking for a partner compete on the marriage market (Burdett and Coles 1997). In economic theories of marriage, individuals are assumed to adopt utility maximizing strategies when searching for a partner.

We formulate a random utility model of partner choice. For a given individual *i* who is actively seeking a partner in period *t*, we define an attractiveness function U_{ij} for potential partner *j* who is also active on the partner market. The attractiveness function of potential partner *j* vis-à-vis person *i* is composed of a deterministic part V_{ij} and a random component ε_{ij}, which accounts for the unobserved part of the attractiveness to the modeler: $U_{ij}=V_{ij}+\varepsilon_{ij}$. A person *i* will choose potential partner *j* over *k* if the following condition is satisfied: $U_{ij}>U_{ik}$, which may be rewritten as: $V_{ij}+\varepsilon_{ij} > V_{ik}+\varepsilon_{ik}$, or: $\varepsilon_{ij} > V_{ik}-V_{ij}+\varepsilon_{ik}$. Since the error terms are unknown, we are at best able to produce probabilistic statements about the likelihood of choosing partner *j* over *k*:

$$P(j \mid j \in C_i) = \Pr(U_{ij} > U_{ik}, \forall k \in C_i, k \neq j) \quad (1)$$

Or, rearranging:

$$P(j \mid j \in C_i) = \Pr(\varepsilon_{ij} > V_{ik} - V_{ij} + \varepsilon_{ik}, \forall k \in C_i, k \neq j) \quad (2)$$

Equations (1) and (2) express the probability that partner *j* in the choice set *C* of individual *i* is preferred over *k* by individual *i*. Different assumptions about the joint distribution functions for the error terms lead to different models. If we assume a multivariate normal distribution we arrive at the probit model; the multinomial logit model (MNL) results if we assume a so-called type I independently and identically distributed extreme value distribution (McFadden 1974). This assumption leads to the well known and computationally tractable form:

$$P_{ij} = \frac{\exp V_{ij}}{\sum_{k \in C_i} \exp V_{ik}}, j \neq k \quad (3)$$

The systematic part of the attractiveness function V_{ij} is determined by the degree of similarity or dissimilarity between both candidates. Based on the body of literature on homogamy reviewed earlier, we expect similar partners to be more inclined to match. We define similarity in a number of dimensions: spatial (*S*), demographic (D), socioeconomic (*E*) and cultural (*K*). Each dimension may be indicated by one or more variables. Suppose X_i is a characteristic of partner *i*, and X_j is a characteristic of partner *j*. We define the *dissimilarity* in a dimension between both potential partners as: $V_{ij}=X_i-X_j$. V_{ij} is an indicator of the (lack of) homogamy. The smaller the dissimilarity between partners, the higher is the affection or utility U_{ij}. The partner who is most similar is chosen. In the conditional logit model the probabilities of choosing the alternatives are based on the characteristics of the alternatives relative to those of the agent making the choice. Therefore, it is especially suitable for behavioral modeling of (spatial) choice situations (Hoffman and Duncan 1988).

Our aim is to determine the parameters of the deterministic part of the attractiveness function, i.e. to estimate the weights of the different dimensions of (dis)similarity of homogamy in the attractiveness function. The deterministic part of the attractiveness function can be written as:

$$V_{ij} = \alpha \cdot S_{ij} + \beta \cdot D_{ij} + \gamma \cdot E_{ij} + \delta \cdot K_{ij} \quad (4)$$

where the *S, D, E* and *K* are vectors of random variables, and the α, β, γ and δ are vectors of coefficients. For instance, the demographic dimension D_i may be operationalized in terms of the difference in age between both potential partners. Similarly, the other (dis)similarity indices may be defined.

The coefficients are estimated by the method of maximum likelihood. In theory the choice set C_i can be very large, and this becomes infeasible when determining the likelihood function. However, a much smaller choice set may be constructed by creating a subset consisting of the chosen alternative, id est the chosen partner *j* and a random sample $\{k=1,..,n, k \in C_i, k \neq j\}$ out of the set of feasible alternatives (see McFadden 1978). *n* is usually in the range between 5 and 10.

A strong assumption of the MNL model is the Independence from Irrelevant Alternatives property (IIA) (Pellegrini and Fotheringham 2002), which states that the relative odds of one alternative being chosen over another should be independent of the presence or absence of other unchosen alternatives (McFadden 1974, based on Luce 1959). This assumption may especially be too strong in a spatial choice context, where there are many alternative choices clustered in space that are more alike each other than alternatives located further away (Pellegrini and Fotheringham 2002). Therefore the model is reformulated as a Competing Destinations model (CDM) that relaxes the IIA property of the MNL model (Pellegrini and Fotheringham 2002). The Competing Destinations model adds the probability π_{ij} that a potential partner is evaluated to the attractiveness function:

$$P_{ij} = \frac{\exp V_{ij} \cdot \pi_{ij}}{\sum_{k \in C_i} \exp V_{ik} \cdot \pi_{ik}}, j \neq k \quad (5)$$

In this additional 'competing destinations correction factor' π_{ij}, the spatial similarity between alternatives in each choice set is included. Spatial similarity is constructed by calculating the geographic centre of gravity of the former residences of all potential partners within a choice set, and subsequently computing the distance from a potential partner's residence to this gravity point. The competing destinations correction factor is then included in our model.

6.4 Data and operationalization

We use vital statistics from the Dutch population register (GBA). This register is a decentralized automated population registration system, managed by the individual municipalities. In the GBA, information on each registered inhabitant of the country is stored, and each individual can be identified through a personal identification number, which enables linkage to spouses, children, and parents. We include unions of both married and unmarried cohabiters. The first group is recorded by the local registrar and is therefore directly documented in the GBA. Unmarried cohabiters are tracked down using household statistics. Statistics Netherlands assigns household positions to persons based on the relationship of an individual to the reference person, his or her marital status, and possibly, children. If two individuals moved to the same address at the same date, they are classified as a single two-person household. The remaining cohabiters are tracked down by using an imputation model to determine which persons living at the same address form a household (Harmsen and Israëls 2003, Israëls and Harmsen 1999). Those living with a partner on 1 January 2005 but not living with a partner on 1 January 2004 were included. The resulting data set contains 326,000 starting cohabiters and incorporates only heterosexual couples.

The spatial dimension is operationalized by examining three factors. First, the distance between partners before cohabitation is calculated based on their former place of residence. The addresses of cohabiters are geo-coded using the Geographical Base Register, which assigns geographic coordinates to each known address based on 6-digit postal codes and house numbers, meaning that each individual address is identified, and geographical distances between partners who are neighbors in the same apartment building can even be determined. The Euclidean distance between both sets of coordinates is then calculated, in meters. Second, as 10% of Dutch partners meet their partner at work (Haandrikman 2010), the exact (geographic) workplace of both cohabiters is extracted from the so-called Social Statistical File (SSF). The SSF consists of several linked data sets based on registrations from official sources such as tax offices. Based on their social security number, the workplace of each cohabiter is linked. Workplace homogamy indicates whether both partners worked in the same company or institute before their relationship started. Third, the place where people study is included, as it may act as a matching mechanism for the higher educated. This is done by matching the cohabiters file with the so-called CRIHO-file, in which all persons who studied at any institute of higher education in the Netherlands in the period 1986-2004 are recorded. A variable listing the institute of higher education where partners were last registered was added to the data set, after which institutes were

linked to cities. Study town homogamy indicates whether or not both partners lived in the same town when they studied at university.

Demographic data is obtained from the GBA, and is operationalized as age homogamy and household position homogamy. Age homogamy pertains to the difference in age between the male and female partner, while household position homogamy refers to the similarity concerning household position before cohabitation, i.e. both living with parents, both living alone and so on.

Socioeconomic information on new cohabiters is deduced from the SSF files. For each cohabiter, their labor market status is known based on their social security number. In addition, the CRIHO-file lists each year that a person has been registered at an institute for higher education. Socioeconomic homogamy is modeled by combining educational homogamy and labor market homogamy. Educational homogamy is operationalized as the similarity concerning educational background, id est whether both partners studied at an institute of higher education or not. Labor market homogamy is measured as the similarity regarding status on the labor market, that is, whether both partners are employed, self-employed, at school, retired, inactive, or have different statuses.

The cultural dimension is operationalized by combining three sets of factors: language, religion and politics. There are three officially recognized regional languages in the Netherlands that are spatially clustered (Heeringa 2004). Living in one of these three language areas is included as a cultural characteristic: living in Friesland is associated with speaking Frisian, whereas living in Groningen, Drenthe, Overijssel or Gelderland is connected to speaking Low Saxon, and living in Limburg is linked to speaking Limburgish. Dialect homogamy occurs when both partners are from the same dialect area. Second, the percentages of voters on local parties at recent municipal elections in a person's residential area is incorporated as a cultural attribute as well, as a proxy for spatial-cultural attachment to the local community. Local attachment similarity occurs when both partners live in areas with a high number of voters on local parties, or when both live in areas with a low number of voters on local parties. Third, as an alternative for religious affiliation (as religion is not registered in the Netherlands), the percentage of voters for Christian Democrat parties at recent parliamentary elections in each person's residential area is included. A high proportion of orthodox Calvinists generally represents the Bible belt quite well. Local religious homogamy arises when both partners live in areas with a high number of voters on Christian Democrat parties, or when both live in areas with a low number of voters on Christian Democrat parties.

6.5 Results

6.5.1 All cohabiters

We begin the analysis by taking a 10 % random sample of the new cohabiters' data set. Then for each cohabiter, a choice set of partners was generated consisting of eight possible partners. One of these eight partners is the real partner, while seven partners are randomly chosen from the 326,000 new cohabiters in 2004. The data set containing all choice sets includes eight times 28,000 partners[35].

Tables A1 and A2 in the appendix show some descriptive statistics of all partners included in the analysis. The parameters of the model are estimated using the clogit procedure in Stata. The parameter estimates of the random utility model of partner choice are displayed in table one. The dependent variable is whether two partners are a match or not.

Table 1. Parameter estimates of random utility model of partner choice, base model

		coeff.	odds ratio	p value
Spatial homogamy				
Log distance between partners before cohabitation (in km)		-1.401	0.25	***
Log distance between the birth places of partners (km)		-0.192	0.83	***
Competing destinations correction factor		0.086	1.09	**
Workplace	Same workplace	-0.001	1.00	*
	Different, unknown or no workplace (ref.)		1.00	
Study town	Same study town	0.001	1.00	
	Different, unknown or no study town (ref.)		1.00	
Demographic homogamy				
Age	Both same age	1.512	4.54	***
	Man one or two years older	1.747	5.74	***
	Man more than two years older	0.857	2.36	***
	Woman older than man (ref.)		1.00	
Life stage	Both living in parental home	0.428	1.53	***
	Both living alone	0.252	1.29	***
	Different, unknown or both similar other household positions (ref.)		1.00	

(table 1 continues on next page)

[35] As the clogit procedure in Stata deletes incomplete cases, those with missing values at either variable are excluded from the analysis. Consequently, partners born abroad are excluded from the analysis, as they have no Dutch birth place, and as these individuals have no address in the Netherlands the year prior to cohabitation, distances to partners before cohabitation could not be computed. The final data set consists of 144,316 partners. To test model stability, several random samples were taken; results were stable throughout.

(table 1 continued)

		coeff.	odds ratio	p value
Socioeconomic homogamy				
Educational level	Both studied at an institute of higher education	0.583	3.41	***
	Both have not studied at an institute of higher education	1.226	1.79	***
	Different or unknown educational levels (ref.)		1.00	
Labor market status	Both employed	0.230	1.26	***
	Both self-employed	0.951	2.59	***
	Both on benefits or inactive	0.856	2.35	***
	Both retired	2.849	17.27	***
	Both at school	1.230	3.42	***
	Different or unknown labor market status (ref.)		1.00	
Cultural homogamy				
Dialect	Both living in the Low Saxon language area	0.280	1.32	***
	Both living in the Frisian language area	0.956	2.60	***
	Both living in the Limburgish language area	0.412	1.51	*
	Both not living in a dialect area	-0.335	0.72	***
	Different or unknown residential area (ref.)		1.00	
Local attachment	Both living in an area with many votes on local parties	0.071	1.07	
	Both living in an area with few votes on local parties	0.187	1.21	**
	Different or unknown residential area (ref.)		1.00	
Bible belt	Both living in Bible belt area	0.803	2.23	***
	Both not living in Bible belt area	0.211	1.23	**
	Different or unknown residential area (ref.)		1.00	
Model statistics				
Log likelihood				-11,124
N				129,318
Pseudo R^2				0.6985
No. of groups (observations) dropped[1]				2813(14,945)

* $p < .05$; ** $p < .01$; *** $p < .001$

[1] Due to all positive or negative outcomes, as a result of the exclusion of cases with missing values, which sometimes leads to the exclusion of the matching partner in the choice set.

The results show that the probability of a partner match increases with all types of homogamy. The spatial effect persists when controlling for all other types of homogamy as well. With increasing geographical distance between partners, the probability of finding a match decreases. The same applies to the distance between the birth places of partners. Working in the same company or institution increases the probability of a match, although the odds ratio is equal to 1. Surprisingly we find no effect of studying in the same town on partner matching.

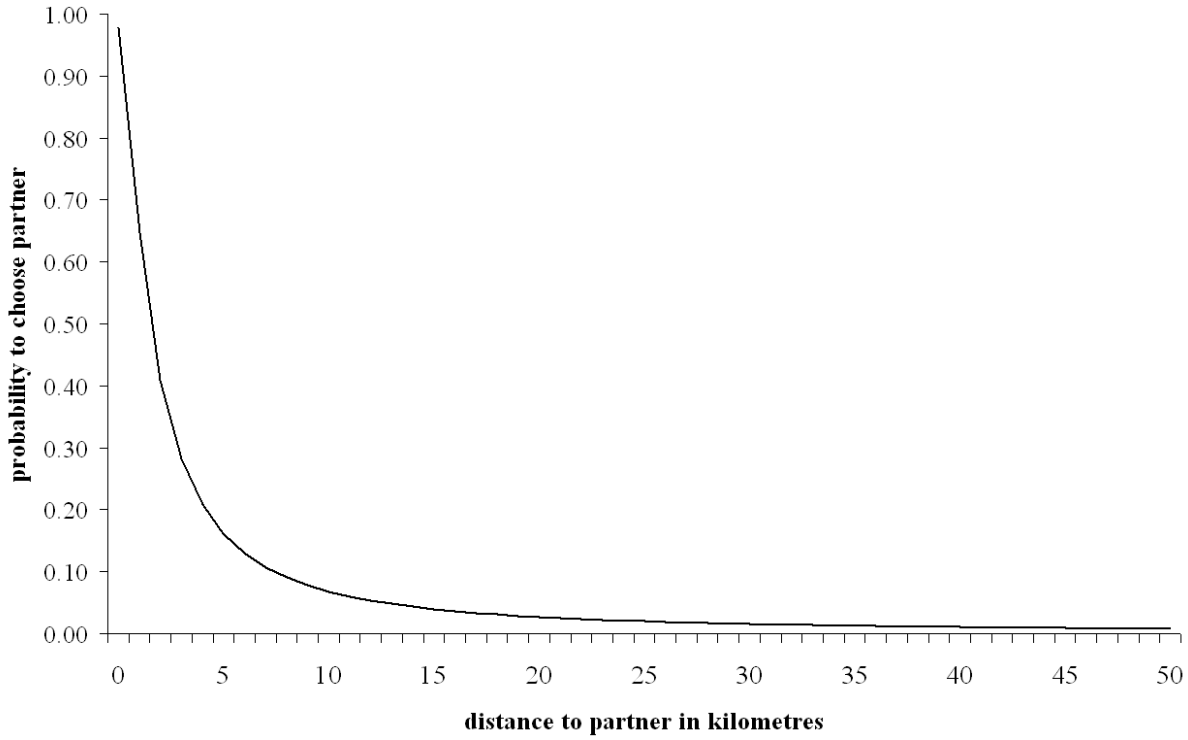
Demographic similarity significantly increases the odds of finding a partner. Combinations where men are a few years older than women are almost six times as likely to match compared to pairs in which women are older, but also same age combinations are 4.5 times as likely to match. Demographic similarity measured as life stage similarity has not been modeled before as far as we know. Being in the same life phase increases the matching probability; in the case of both living in the parental home before cohabitation, as well as both living alone before marriage or cohabitation.

Although it has been established before that individuals tend to choose their life partners based on economic motives, we add that this is also the case when controlling for spatial, demographic and cultural indicators. Both partners having a higher level of education significantly increases the odds of matching with an odds ratio of 3.4, whereas the odds for a combination of individuals who have lower levels of education is 1.8. One's status on the labor market also matters on the partner market. Similar positions lead to increasingly higher odds to find a partner match.

Another strength of this research is the inclusion of cultural homogamy in modeling partner matching. As table 1 shows, homogamy concerning dialect, local attachment and living in the Bible belt significantly increases the probability of finding a partner. When both partners lived in the Frisian language area before cohabitation, the odds to match are 2.6 times as likely compared to the case where partners lived in different language areas. The respective odds ratios for Low Saxon and Limburgish language areas are 1.3 and 1.5. Interestingly, when both candidates live outside a dialect area, the probability of a match is lower than when they come from different dialect areas. The estimates for local attachment as a political indicator are only significant for combinations of partners where both lived in an area with few votes on local parties before cohabitation; these are 1.2 times as likely to match compared to those who lived in different areas. The indicator for religion, Bible belt homogamy, comes out as expected. Both living in the Bible belt area gives a 2.2 times higher odds ratio of matching compared to different residential areas before cohabitation, but also both not living in Bible belt areas increases the likelihood of matching, although the odds ratio is lower.

Figure one illustrates the distance effect in partner choice for all new cohabiters. The graph shows the probability of forming a match with a partner, based on the coefficient found for the log distance between partners before cohabitation in kilometers, but with a varying distance to potential partners. There is strong distance decay present in partner choice; within a short distance, partner choice is much more probable than at greater distances.

Figure 1. Probability of choosing a partner with varying distance to potential partners (N=129,318)



6.5.2 Distance effect for subgroups

So far we have shown that partner choice is highly influenced by distance effects. It is plausible to assume that the distance effect works differently for different subgroups. Therefore, we have included interactions between the distances to partners before cohabitation and four characteristics of partners.

Table two shows that the distance effect in the partner choice process differs for subgroups. For the higher educated and for those living in strongly urbanized areas, the distance effect is smaller, or in other words, the spatial horizons regarding partner choice are greater. We found no significant interaction effects for different age groups and those living in the Bible belt.

The final model including the relevant interactions is depicted in table three, showing a larger fit compared to the model without interactions. The estimates are very similar to those of the first model, apart from some slight changes in the size of coefficients. Two main differences are that the final model does not show any effect of living in the Limburgish language area and that there is an effect of both living in areas with strong local attachment on partnering probabilities.

Table 2. Parameter estimates of interactions with distance between partners before cohabitation, random utility model of partner choice

		coeff.	odds ratio	p value
Educational level[1]	Higher educated & distance between partners before cohabitation	0.188	1.21	***
	Lower educated & distance between partners before cohabitation (ref.)		1.00	
Degree of urbani-zation[2]	Urban & distance between partners before cohabitation	0.440	1.55	***
	Rural & distance between partners before cohabitation (ref.)		1.00	
Age[3]	Young & distance between partners before cohabitation	-0.161	0.85	
	Middle age & distance between partners before cohabitation	-0.120	0.89	
	Old age & distance between partners before cohabitation (ref.)		1.00	
Bible belt[4]	Bible belt & distance between partners before cohabitation	0.069	1.07	
	No Bible belt & distance between partners before cohabitation (ref.)		1.00	

[1] Educational level is divided in those who studied at an institute of higher education and those who did not.

[2] Degree of urbanization is divided in two classes. Partners who lived in a postal code area categorized as very strongly urbanized or when the average surrounding address density is equal to or higher than 2,500 addresses per square kilometer before cohabitation are classified as urban; other areas are qualified as non urban.

[3] Ages have been divided in 3 groups: young=partners until age 29, middle age=partners in the ages 30 to 64, old age=partners of 65 years and older.

[4] Partners who lived in an area with a high number of voters on Christian Democrat parties before cohabitation are classified as living in a Bible belt area.

Table 3. Parameter estimates of random utility model of partner choice, final model

		coeff.	odds ratio	p value
Spatial homogamy				
Log distance between partners before cohabitation (in kilometers)		-1.646	0.19	***
Interactions	Higher educated & distance between partners before cohabitation	0.175	1.19	***
	Lower educated & distance between partners before cohabitation (ref.)		1.00	
Interactions	Urban & distance between partners before cohabitation	0.441	1.56	***
	Rural & distance between partners before cohabitation (ref.)		1.00	
Log distance between the birth places of partners (km)		-0.184	0.83	***
Competing destinations correction factor		0.084	1.09	**
Workplace	Same workplace	-0.001	1.00	*
	Different, unknown or no workplace (ref.)		1.00	
Study town	Same study town	0.001	1.00	
	Different, unknown or no study town (ref.)		1.00	
Demographic homogamy				
Age	Both same age	1.499	4.48	***
	Man one or two years older	1.739	5.69	***
	Man more than two years older	0.848	2.33	***
	Woman older than man (ref.)		1.00	
Life stage	Both living in parental home	0.425	1.53	***
	Both living alone	0.263	1.30	***
	Different, unknown or both similar other household positions (ref.)		1.00	
	Different or unknown labor market status (ref.)		1.00	
Socioeconomic homogamy				
Educational level	Both studied at an institute of higher education	1.191	3.29	***
	Both have not studied at an institute of higher education	0.588	1.80	***
	Different or unknown educational levels (ref.)		1.00	
Labor market status	Both employed	0.227	1.25	***
	Both self-employed	0.973	2.65	***
	Both on benefits or inactive	0.866	2.38	***
	Both retired	2.899	18.16	***
	Both at school	1.192	3.29	***

(table 3 continues on next page)

(*table 3 continued*)

		coeff.	odds ratio	p value
Cultural homogamy				
Dialect	Both living in the Low Saxon language area	0.175	1.19	**
	Both living in the Frisian language area	0.774	2.17	***
	Both living in the Limburgish language area	0.201	1.22	
	Both not living in a dialect area	-0.313	0.73	***
	Different or unknown residential area (ref.)		1.00	
Local attachment	Both living in an area with many votes on local parties	0.084	1.09	*
	Both living in an area with few votes on local parties	0.161	1.17	*
	Different or unknown residential area (ref.)		1.00	
Bible belt	Both living in an area with many votes on Christian democrat parties	0.708	2.03	**
	Both living in an area with few votes on Christian democrat parties	0.217	1.24	**
	Different or unknown residential area (ref.)		1.00	
Model statistics				
Log likelihood				-11,016
N				129,318
Pseudo R^2				0.7015
No. of groups (observations) dropped[1]				28

* $p < .05$; ** $p < .01$; *** $p < .001$

[1] Due to all positive or negative outcomes, as a result of the exclusion of cases with missing values, which sometimes leads to the exclusion of the matching partner in the choice set.

6.6 Conclusions

Many studies have established that individuals tend to choose partners similar to themselves. We used Dutch micro data on all new cohabiters, linked to geographical, educational and labor market registers, together with voting results, to evidence four types of homogamy in human beings *in one model*. Besides employing unique data, we used a special method, namely a spatial choice model using random utility theory, to test the hypothesis that spatial similarity between partners is highly persistent beside other types of homogamy. Our model takes into account the characteristics of the person who chooses a partner, attributes of the partner that is chosen, as well as attributes of the partners who are not chosen. The partner with the highest utility compared to the utility of all other potential

partners is selected. The conditional logit model is seldom used in demography, but is very appropriate when modeling behavioral choice situations (following Hoffman and Duncan 1988).

We find clear evidence that the probability of a partner match is increased in the case of spatial, demographic, socioeconomic as well as cultural homogamy. Given a choice set of partners, the highest likelihood of a match occurs with a person who is born and lives near by, who has the same age (or in the case of males, is slightly older than the female), who is in the same life stage, has the same educational level, has the same labor market status, speaks the same dialect, and lives in culturally similar residential areas.

Distance still matters in relationships. Notwithstanding large-scale increases in mobility, educational participation, knowledge distribution and general affluence, partners are still found at short distances. A combination of preferences for cultural similar persons, who are bound to be found near by, the norms to find a partner within the group, and the limited opportunities to meet potential partners who are similar to oneself, lead to partners who are similar in spatial origins and many other ways. This is against modernization theories, according to which social openness is supposed to increase in time (e.g. Beekink et al. 1998; Smits 1996; Van de Putte 2003). Partner preferences generally shift from ascribed characteristics such as social class and geographical origin to achieved attributes such as educational level and occupation (Van de Putte 2003). However, this article has shown that preferences for a partner of the own group are still very large. More than that, the own group is not only determined by social class, but also by geographical origins, membership of local cultural groups and life stage. Distance decay is less pronounced for the higher educated and those living in cities, who probably have wider spatial horizons. However, the majority of people, mostly with lower levels of education and living in smaller cities or rural areas tend to choose spatially homogamous relationships. Similar to Van de Putte's study in Belgium (2003), we do not find empirical evidence for increased social openness in the Netherlands.

The confirmation that spatial homogamy is important when controlling for other types of homogamy, appears to be a new finding, previously unidentifiable in the literature. Moreover, including not only the place of residence of partners, but also their workplace and study town is a novelty. The distance effect does vary by degree of urbanization and level of education as mentioned in the previous section; however, the distance decay is pertinent in all subpopulations. In our models we found no significant effect of studying in the same place, which was surprising and for which we have no appropriate explanation at this moment.

Corroborating previous studies (De Graaf et al. 2003; Van Poppel et al. 2001), we found support for the occurrence of demographic homogamy in couple formation. An innovation in this regard is the addition of homogamy regarding life stage, measured as similarity of place in the household. Similar life stages apparently lead to similar interests. The numerous studies on socioeconomic homogamy are confirmed by our findings, to which we add that they persist when controlling for distance. Both having the same educational level increases the odds of partner choice, but also labor market status homogamy contributes to the probability of finding a match.

Why does an individual choose a partner who is similar to themself? From theory we know that partner choice is the sum of preferences, norms and opportunities (e.g. Kalmijn 1991; Van de Putte 2003). The opportunities to meet potential partners influence partner choice and the probability to meet similar partners, as life partners are usually met in spatially segregated local marriage markets, which are segmented by relationship career, education, age, religion and geography (Haandrikman 2010). The social contexts of people lay the foundation of the group of potential partners from which a partner is eventually selected. This assortative process tends to lead to homogamy (Kalmijn and Flap 2001). It seems plausible to assume that the norms to choose a partner within the group also lead to homogamous partnerships. From a qualitative study on partner choice that was conducted in the Netherlands, it was found that individuals are very aware of the type of persons whom they should not choose, in order to minimize potential conflict with their parents, the church or fellow villagers (Haandrikman and Hutter 2010). As shown in this article, partners are preferred who are in the same life stage, who have the same background, and who live in the same surroundings. These combined preferences could be labeled as 'lifestyle'. Our finding that cultural similarity increases the odds of a partner match, adds a new dimension to lifestyle alongside the traditional determinants of education and social class. Affiliation with the same cultural values, which are mostly spatially clustered, increases the odds for partner choice. Haandrikman and Hutter (2010) found that local cultural factors influence the degree of spatial homogamy: partner choice is influenced by the connotations people have about potential partners based on their residential location, religion and degree of urbanization. Supporting Van Poppel and Ekamper's (2005) findings, the cultural dimension of homogamy is significant.

This paper has modeled partner matching, in which both the attributes of the chosen partner and that of alternative candidates are included. We have used unique micro data on new cohabiters in the Netherlands, including geographic coordinates of unique household addresses. For each cohabiter, a choice set was

created with eight possible partners, of which one was the real partner. The model takes the spatial locations of potential candidates within a choice set into account, including a competing destinations correction factor to take the spatial similarity between alternatives into account. Spatial homogamy increases the odds of a partner match, even when controlling for other kinds of homogamy. In spite of advances in modern communication and increased opportunities for education and travel, the probability to find a life partner is highest of all at very short distances.

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Appendix Table A1. Descriptive statistics of partner characteristics, N=144,316

Variables	N	%
Age group		
15-29	73,530	51.0
30-64	67,765	47.0
65+	3,021	2.1
Position in the household before cohabitation		
Living in parental home	49,673	34.4
Living alone	67,586	46.8
Other household position or no information on household position	27,507	18.7
Marital status before cohabitation		
Unmarried	111,585	77.3
Married or registered partnership	9,931	6.9
Widowed	3,448	2.4
Divorced	19,352	13.4
Educational level		
Studied at an institute of higher education	48,474	33.6
Have not studied at an institute of higher education or no information on education	95,842	66.4
Labor market status		
Employed	101,928	70.7
Self-employed	6,280	4.4
On benefits or inactive	16,206	11.2
Retired	3,300	2.3
In school	16,490	11.4
Dialect areas		
Living in the Low Saxon language area	41,509	28.8
Living in the Frisian language area	6,022	4.2
Living in the Limburgish language area	9,196	6.4
Not living in dialect area	87,589	60.7
Local attachment areas		
Living in an area with 40% or more votes on local parties	31,650	21.9
Living in an area with less than 40% votes on local parties	112,666	78.1
Bible belt area		
Living in an area with 15% or more votes on Christian democrat parties	7,273	5.0
Living in an area with less than 15% votes on Christian democrat parties	137,043	95.0

Appendix Table A2. Descriptive statistics of homogamy variables, N=144,316

Variables	N	%
Spatial homogamy		
Workplace		
Same workplace	1,173	0.8
Different workplace, no or workplace unknown	143,143	99.2
Study town		
Same study town	14,234	9.9
Different study town, no or study town unknown	130,082	90.1
Demographic homogamy		
Age difference		
Both same age	6,665	4.6
Man one or two years older	13,891	9.6
Man more than two years older	65,597	45.5
Woman older than man	58,163	40.3
Life stage		
Both living in parental home	18,705	13.0
Both living alone	32,468	22.5
Different or unknown household position, or both similar other household position	93,143	64.5
Socio-economic homogamy		
Educational level		
Both studied at an institute of higher education	18,265	12.7
Both have not studied at an institute of higher education	65,652	45.5
Different educational levels	60,399	41.9
Labor market status		
Both employed	72,655	50.3
Both self-employed	315	0.2
Both on benefits or inactive	2,227	1.5
Both retired	302	0.2
Both at school	2,450	1.7
Different or unknown labor market status	66,367	46.0
Cultural homogamy		
Dialect		
Both living in the Low Saxon language area	12,315	8.5
Both living in the Frisian language area	933	0.6
Both living in the Limburgish language area	1,580	1.1
Both not living in a dialect area	62,539	43.4
Different dialect areas	66,896	46.4
Local attachment		
Both living in an area with 40 % or more votes on local parties	8,760	6.1
Both living in an area with less than 40 % votes on local parties	89,393	61.9
Different areas	46,163	32.0

(table A2 continues on next page)

(table A2 continued)

Variables	N	%
Cultural homogamy		
Bible belt		
Both living in an area with 15% or more votes on Christian democrat parties	904	0.6
Both living in an area with less than 15% votes on Christian democrat parties	130,843	90.7

7 'THAT'S A DIFFERENT KIND OF PERSON' - SPATIAL CONNOTATIONS AND PARTNER CHOICE[36]

ABSTRACT

The article investigates the process of partner choice and the specific role of geographical distance in this process. This focus on the spatial component is a unique and new approach to address the topic. By adopting a qualitative approach, the decision-making process preceding partner choice is captured, including the preferences people have for partners, the norms influencing partner choice, and the places people go to meet potential partners. In a Dutch village, focus groups were organised around the topic. The results show that the distance at which partners are found is influenced by the villagers' perceived superiority over others, the alleged mentality of people in other places, their religion, and the degree of urbanisation of these places. Although most partner preferences are implicit, local cultural similarity in partners is highly appreciated, and villagers know exactly whom not to bring home to their parents. The study paints a portrait of partner choice in a rural area in the Netherlands, which shows that traditions and customs are maintained and connotations about neighbouring areas persist for decades.

7.1 Introduction

People tend to look for similar partners. From an elaborate body of literature it is known that relationships are homogamous in terms of age, education, social class,

[36] This chapter is reprinted from: Haandrikman, K. and Hutter, I., 'That's a different kind of person' – Spatial connotations and partner choice, and has been submitted to an international journal.

ethnic group, and geographic origin. Distance decay in partner choice is captured by the term spatial homogamy, signifying the similarity between partners concerning their geographic origin. A Dutch study using register data revealed that the Dutch find their partners within very short distances. Fifty percent of new cohabiters found their partner within a 6-kilometre distance (Haandrikman et al. 2008). The same study concluded that spatial homogamy varies by age and life stage of the partner, by educational level, and by place of residence.

This article seeks to understand why partners are found within a short distance. To comprehend partner choice and its spatial dimension, theories from sociology and geography are used. According to Kalmijn (1991), partner choice generally results from three factors: preferences for certain characteristics in a partner, social or cultural norms, and the opportunities to meet partners. Each of these factors may be influenced by geographical distance. The main research objective is to understand the decision-making process that precedes partner choice, with a particular focus on the role of distance in this process.

This contribution is part of a larger project on the spatial dimension of the partner market, which applies a mixed methods research design. The role of geographical distance in the process of partner choice has been examined using micro data from population registers, by calculating the geographical distances between all new cohabiters in a given year, and exploring how spatial homogamy varies by certain characteristics of the partner (Haandrikman et al. 2008). For several subgroups, the probability of choosing a partner with similar characteristics was also estimated (Haandrikman and Van Wissen 2008). Using survey data, the social differentiation of meeting places was studied. In a study on regional differences in spatial homogamy (Haandrikman et al. 2010), it was found that regional cultural differences account for part of the regional differences in spatial homogamy, although the effect of religion and dialect on distances to partners was not straightforward. Therefore, some questions remain as to how people select a partner and the role of distance herein. Do people have implicit partner preferences? How do significant others influence the process of partner choice? How are people influenced by the opportunities to meet partners? How does geographical distance play a role in the decision-making process of partner choice? And how are these processes today different from a generation ago? In these processes, our interest lies in the role of local cultural differences. For instance, what are popular connotations about people from neighbouring villages, and how do these influence partner choice?

To answer these questions, a qualitative approach was chosen. In the Dutch village of Vriezenveen, focus groups were organised in which partner choice in the village was discussed. The stories of the respondents illuminate how partners

are chosen and how place influences partner choice. Hence, they explain, contextualise and illustrate the patterns found in the quantitative part of the study.

The next section delves deeper into the topic of partner choice and its spatial dimension, after which reasons for the choice of the case study using register data will be discussed. Then the research design will be described, followed by results and conclusions.

7.2 Partner choice and its spatial dimension

Partner choice is subject to strong distance decay. Spatial homogamy, or choosing a partner who shares the same geographical origin, was a topic much researched in the 1950s and 1960s in the US and UK (e.g. Bossard 1932; Coleman 1979; Coleman and Haskey 1986; Davie and Reeves 1939; Küchemann et al. 1974), but has received little attention in recent years.

Sociologists assume that three factors generally influence the choice of a partner: preferences, social and cultural norms, and opportunities to meet partners (Kalmijn 1991). Studies on partner *preferences* have shown that people tend to look for similar partners. Homogamy has mostly been studied from a sociological perspective, in which the socio-economic and cultural dimensions of homogamy featured prominently (e.g. Hendrickx 1994; Kalmijn 1994; 1998; Schwartz and Mare 2005; Smits 1996; Uunk 1996). Similarity is usually seen as attractive: sharing the same values and opinions confirms each other's behaviour and worldviews (e.g. Kalmijn 1991). Geographers have added the spatial dimension to this concept (Clegg et al. 1998; Coleman 1979; Coleman and Haskey 1986; Duncan and Smith 2002; Küchemann et al. 1974; Fisher 1980; Mayfield 1972), since in many of the homogamy studies it is implicit that potential partners tend to live nearby. Moreover, the preference for cultural similarity stimulates the choice of a partner from the same or a related region, given the often shared language, religion and ideas concerning partnerships and family (Van Poppel and Ekamper 2005).

Social and cultural control by parents, family, the peer group, neighbours, colleagues and the church, and the sanctions that are imposed when people find a partner outside a group, also influence the process of mate selection. These *social and cultural norms* may lead to partner choice within the group. Some religious groups are known for high rates of endogamy, such as Catholics, Protestants and Jews (Blau et al. 1982; Kalmijn 1991). Churches often compete for believers, and as the risk of losing members of the congregation is high in the case of a mixed marriage, the latter are discouraged (Kalmijn 1998). In the Netherlands, religiously homogamous marriages were commonplace until the 1970s and not unusual in the 1980s either (Hendrickx 1998). In the course of time, the cultural and social norms concerning the choice of a partner within the group have diminished due to

increased individualism and autonomy (Van de Putte 2003). At present, high rates of religious homogamy are found among the re-reformed (Hendrickx 1994) and among the Moroccans and Turks in the Netherlands (Esveldt and Van Poppel 2005) who are mostly Muslim. As social and cultural groups are often geographically clustered, group norms may lead to partner choice within a geographically distinct area.

Third, the *opportunities* to meet partners are restricted by a number of geographical factors. Physical proximity increases the likelihood of spontaneous social encounters that increase the chance of meeting potential partners. Moreover, bridging the distance still involves time, energy and costs. Marriages involving long distances between partners are still relatively rare. Geographical location of partners also influences the level of spatial homogamy. In rural and peripheral areas, partners are found at greater distances (Haandrikman et al. 2008), as the spatial distribution of meeting places and potential partners with certain characteristics influences the probability of selection. Furthermore, schools, neighbourhoods, and for instance hobby clubs function as local marriage markets where similar types of people meet and mate (Smeenk 1998). The Dutch partner market is segmented by geography, religion, age, education and relationship history (Haandrikman 2010). As people sharing demographic, socioeconomic and cultural similarities tend to live close to one another as well, the odds of spatial homogamy increase as well.

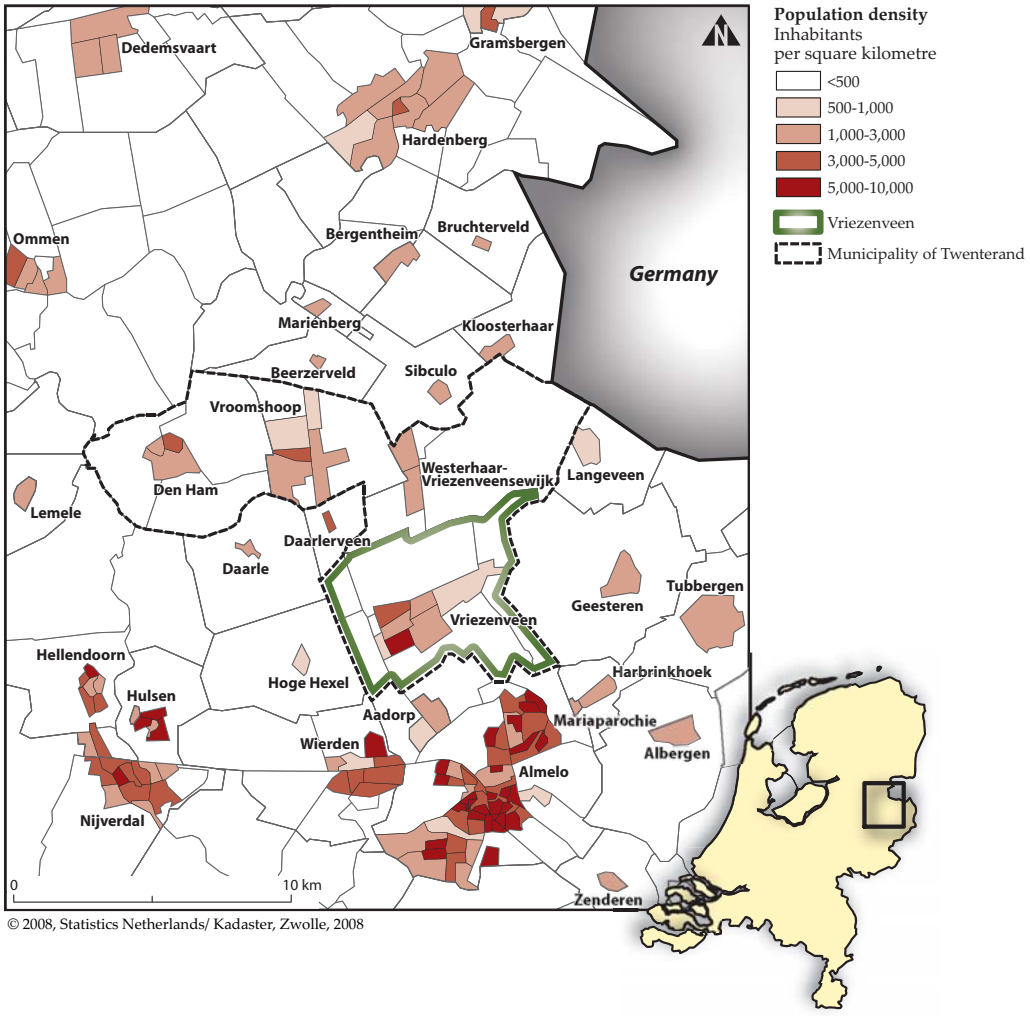
7.3 Case study Vriezenveen

Given the interest in the influence of local cultural differences on partner choice, a case study was chosen in which the local cultural set-up differs from the surrounding area. The choice of Vriezenveen as a case study was motivated by the intention to investigate whether partner choice in such a case is directed inwards, or, in other words, whether spatial homogamy is higher. The local cultural set-up differs in several ways. The first difference pertains to religion. Most Vriezenveners are active members of the (relatively orthodox) Dutch Reformed Church[37], whereas the village is located just beside a larger Catholic area. Moreover, the village is home to two small rigidly orthodox Protestant communities. Secondly, the dialect bears little resemblance to the surrounding Tweants language. In fact, the Vriezenveen dialect has been called a dialect island (Entjes 1979; Heeringa 2004). Figure one shows the location of Vriezenveen within

[37] The most recent numbers are from 1980, when 68 percent of people living in the municipality of Vriezenveen (including Westerhaar-Vriezenveensewijk and Aadorp) were found to be Dutch reformed (Gemeente Vriezenveen 1982); in 1971 this share was 73 percent based on the census; and in 1978, based on a local survey, it was 70 percent (Gemeente Vriezenveen 1980). However, it is unclear whether these sources have used similar municipal borders and methodologies.

the Netherlands; it is located on the west side of Twente in the municipality of Twenterand. In 2006 it had approximately 13,000 inhabitants. More than 90 percent live in the built-up area of the village.

Figure 1. Location of Vriezenveen and surrounding population density (2008)[38]

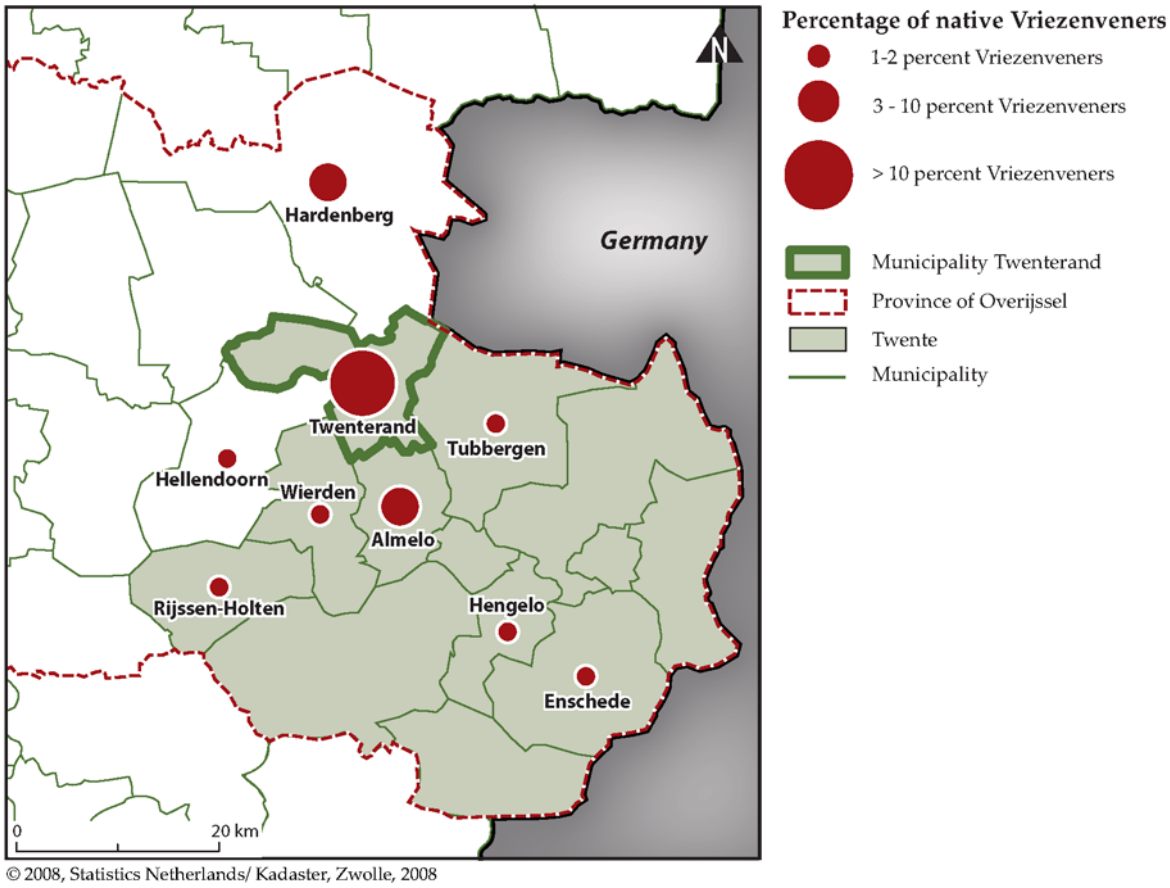


The history of the village lends a special character to its population. Vriezenveen came into existence in the fourteenth century, when the lord of Almelo issued elongated pieces of land along the main street. Consequently, the village obtained its peculiar long shape, with houses built one behind the other at an angle to the main street, on the west side called the Westeinde and on the other side the Oosteinde. The newcomers mostly came from Holland (the current west of the Netherlands), the north of the Netherlands and Germany. Most Vriezenveners

[38] The former municipality of Vriezenveen consisted of the villages of Vriezenveen and Westerhaar-Vriezenveensewijk. In 2001 the new municipality of Twenterand came into existence through a merger with the municipality of Den Ham in which the villages of Den Ham and Vroomshoop are located.

were self-supporting and earned their living from farming and trading, even with Russia. However, the village was relatively isolated from the outside world for centuries, as people and goods could only be transported on sand tracks or across brooks. Entjes (1970) argued that as a result, the dialect stayed intact, and the population remained fairly conservative. Today, Vriezenveen has become a more open community, and it has attracted families from elsewhere who are charmed by its development plans.

Figure 2. Current municipality of residence (2009) of people born in Vriezenveen[39]



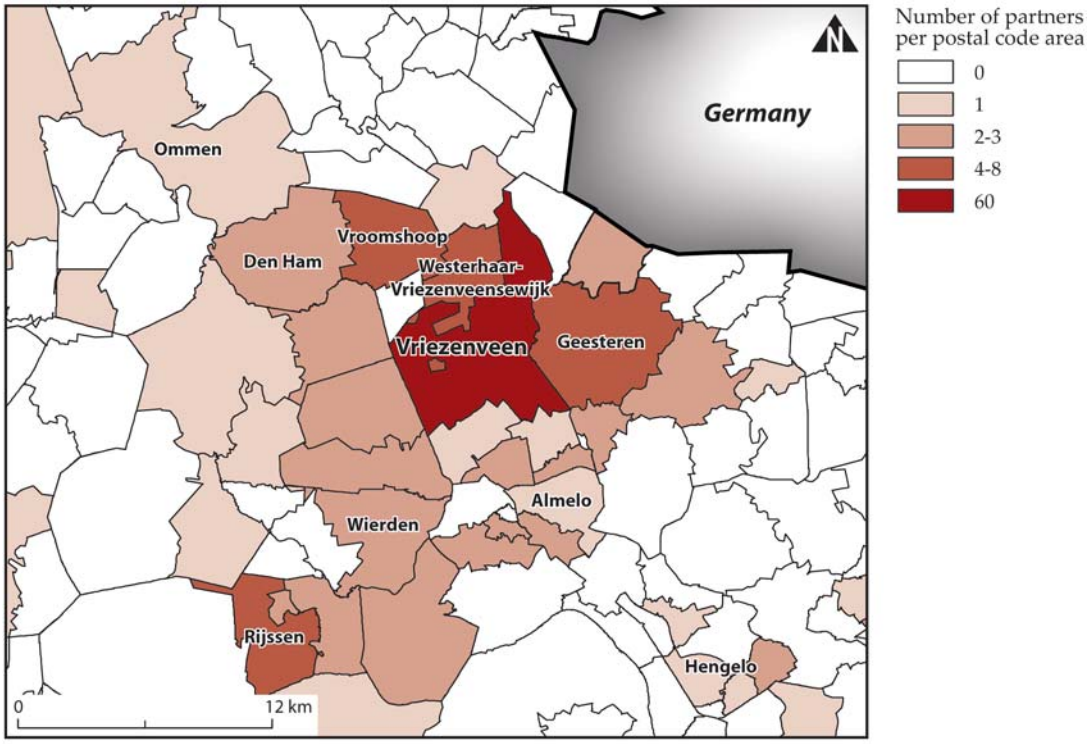
Source data: Population register, Statistics Netherlands.

Although the population of the villages was made up of from colonists from different places, Vriezenveen has had an autochthonous population for centuries. Of the current population (in 2009), almost 40 percent were also born there, with an additional 27 percent born in the neighbouring town of Almelo, where the main regional hospital is located. The further spatial distribution of birth places of Vriezenveners is very local, with 85 percent born in Twente, an additional five

[39] These include those born in Almelo and currently living in Vriezenveen, in order to approximate those Vriezenveners born in the hospital in Almelo.

percent born in the rest of the province of Overijssel, nine percent born in the rest of the country and two percent born abroad. The strong attachment to their place of origin is also apparent from figure two, which shows the spatial pattern of current residence of those born in Vriezenveen (and still alive). Fifty-eight percent still live in Twenterand and almost 80 percent live in Twente. Although there are Vriezenveners who spread out across the country, 92 percent stayed in the eastern part. In the course of time, the proportion of Vriezenveners to non-Vriezenveners changed. In 1960, 75 percent of the inhabitants were natives, whereas this decreased to 66 percent in 1977 (Gemeente Vriezenveen 1982[40]).

Figure 3. Spatial pattern of partner choice of Vriezenveners, 2004 (N=186)



Source data: Statistics Netherlands, own calculations. See Haandrikman et al. (2008) for the methodology.

The level of spatial homogamy in Vriezenveen can be labelled as average to high; in other words, residents find their partner from nearby. Register data on all new cohabiters in 2004 revealed that almost 50 percent of new cohabiters in Twenterand chose a partner from that municipality. The Dutch national average is 33 percent. With regard to the two main postal code areas of Vriezenveen, it

[40] This pertains to the former municipality of Vriezenveen. Taking only the village Vriezenveen into account, the share of autochthonous Vriezenveners in 1977 was 70 percent. Unfortunately, no recent data is available.

appears that 32 percent of its new cohabiters found a partner within that area. Fifty percent of Vriezenveners found a cohabitation partner within 6.7 kilometres; for the Netherlands this was 6.2 kilometres in 2004. Figure three shows the local partner choice pattern for Vriezenveners. A cursory visual inspection shows that apart from Vriezenveen, some partners were found in the neighbouring towns such as in Vroomshoop, Westerhaar-Vriezenveensewijk (usually called Westerhaar) and Rijssen. However, not many partners were found to the south-east of the villages or in the larger town of Almelo.

7.4 Research design

7.4.1 Focus groups in theory

The choice for Vriezenveen was motivated by the research questions and previous findings from spatial homogamy studies (Haandrikman et al. 2008; Haandrikman and Van Wissen 2008; Haandrikman et al. 2010). In light of the main objective concerning the choice of partners with a particular focus on the role of geographical distance in this process, the research design was constructed in order to capture the decision-making process preceding partner choice. To understand this process, one has to get down to the micro level (Coleman 1990; Smith 1989). Five focus groups were organised around the topic of partner choice.

According to Morgan (1996), a focus group is a research technique that collects data through group interaction on a topic determined by the researcher. Focus groups as a research method provide insights into understandings and views about a social or environmental issue, and how these views relate to each other (Greenbaum 2000). They are particularly useful when people's knowledge and experience are the focus of study. Focus groups are also used to validate findings from quantitative research or to gain a deeper understanding of a certain issue (Krueger and Casey 2000; Liamputtong and Ezzy 2005). Compared to other methods, a strength of focus groups is the so-called 'group effect': participants adding to each other's views, querying each other and explaining themselves to each other, giving spontaneous responses encouraged by interaction, which yields valuable data on consensus and diversity among respondents, disclosing group norms (Morgan 1993; 1996; Skop 2006). An additional advantage of focus groups is, as Morgan (1996) argued, that the researcher is able to ask respondents about their differing views directly, as well as to clarify views of their peers, family members, and so on, which in the current study is especially valuable since the aim is to map out partner choice of a whole village.

Segmentation in focus groups has a twofold objective: it enables comparison between groups, and it identifies common ground among the respondents, generally facilitating the discussion (Morgan 1996). For each subgroup, two or

three focus group sessions are generally conducted, or until the point of data saturation has been achieved (Greenbaum 2000). Six to ten respondents per group is said to be suitable (Krueger and Casey 2000). Smaller groups are suggested when topics are emotionally charged or very familiar; with fewer people intimacy increases and the feeling of security is greater (Skop 2006). Therefore, in the current study, it was decided that smaller groups were more suitable. Moreover it gave respondents enough time to share their personal experiences and those of their peers. The main researcher acted as the single moderator. Participants tend to talk more freely when the moderator is of the same national, ethnic and/or racial origin as the participants (Skop 2006). The researcher was born in a neighbouring village and is able to understand the local dialect.

7.4.2 Recruitment strategy including reflection

Based on the research questions, the target population consisted of both men and women from Vriezenveen who have undergone the process of choosing their partner. The first group comprised people aged 35 or younger, who were currently married or cohabitating with a partner whom they met after 2000, while the second group included those aged 55 or older, who were or had been married to a partner whom they met before 1980. Based on discussions with local contacts, it was decided to publicise the study through advertisements in the local newspapers to attract participants. Together with a local organisation that is a focal point in the community as articulated by its role in the historical museum, organisation of activities and newsletters, a press release was formulated and placed in ten local newspapers. As there was little response from these adverts, flyers were distributed around the area, and notices were put on the pages of Vriezenveen's online social network. At the same time, people were contacted whom the researcher knew herself (as she was born in a nearby village), as well as others who had friends or acquaintances in the village. They were asked to identify potential participants for a group discussion. Moreover, respondents were asked to suggest other participants. The local organisation provided space in their museum where the discussions could be conducted.

During the recruitment stage, the researcher found out that, although many people had seen the advertisement or flyer, few were interested in participating. People told the researcher that 'this is a closed community' and that 'people do not talk about such things here.' The researcher was sometimes seen as a stranger[41], in spite of being born and bred in a neighbouring village. Others felt that the researcher was being nosy about their personal business; they were concerned

[41] In the dialect: 'een vrumde'.

about what might be asked and were uncertain of what would be done with the information. Furthermore, anonymity was an issue for some people in the small village community since most people knew each other.

However, the fact that the researcher was from a neighbouring town did open many doors, in the first place because she was able to understand the dialect. Moreover, sharing some personal details was very much appreciated by the villagers, such as sharing where the researcher met her partner - a disco which they all knew. Ultimately, most respondents were found through the personal network of the researcher. During the discussions, it became clear that the respondents had a very negative perception about Vroomshoop, the village where the researcher was born in. The researcher was struck by the participants' openness and she did not receive any impression that the participants felt inhibited in sharing their stories.

7.4.3 Focus groups in practice

The group discussions were held using a questioning route (see appendix) based on the theoretical framework on partner choice. The aim of the focus groups was to find out what people look for in a partner, where people go and meet potential partners and who or what influences this process. Additionally, prevailing mental associations about people from neighbouring villages which may influence partner choice were included in the questioning route. Based on a pilot interview, questions and sequencing were adjusted.

The original target was an average of six participants per group discussion. However, the ultimate number of participants was only 13, spread over five focus group discussions, conducted in June and July 2009. The total number of participants was much lower than anticipated, although groups of two to four respondents per session provided ample opportunity for each participant to share his or her stories, resulting in a complete range of villagers' views on partner choice.

The group discussions started with an introduction round in which both the researcher and the respondents revealed where they met their partner. Most respondents would then open up and share their personal stories. The main discussion consisted of partner preferences, the influence of others on partner choice, the opportunities to meet partners, and the role of distance and perceptions and attitudes towards people from neighbouring villages. As spontaneous turns in the discussion often occurred, the sequence of topics was usually mixed. Discussions lasted one and a half hours on average. One discussion was held entirely in the local dialect, while parts of the other discussions were conducted in the dialect as well. The language used at the start of the group discussion was a

cue for the rest of the session - it depended on whether the participants used dialect or Dutch at the beginning. An assistant moderator was present during the sessions, taking care of organizational issues, making key notes on the course of the discussion, on non-verbal behaviour of participants and noting visual cues that would otherwise be unnoticed.

After the data collection, the focus group discussions were fully transcribed and each single respondent was identified, resulting in an average of 40 pages of text per focus group. The transcripts were coded and analyzed using the Atlas.ti software. Data analysis was done bearing in mind Krueger and Casey's (2000) statement that 'the aim of focus groups is not to infer but to understand, not to generalise but to determine the range, and not to make statements about the population but to provide insights about how people in the groups perceive a situation' (p. 83).

7.4.4 Study population

The age range of the younger participants was 17 to 31, whereas that of the older group was 61 to 76. Three of the former group were born in the hospital in Almelo, while the rest were born in Vriezenveen, and all were raised in the village. Despite the desirability of representation from a variety of religion, all respondents were reformed Protestants. All of them had heterosexual relationships. The level of education varied, although more respondents were lower educated. Most Vriezenveners met their partner at an early age, in the range of 14 to 23 years. One of the older participants was a widower; while the others were still married to the partner they met before the 1980s. All except one of the younger participants were married. Six out of eight of the older partners were from Vriezenveen, while this only applied to two out of five of the younger partners. The latter were from the neighbouring villages except for one partner who had moved from the region of Zwolle to Vriezenveen in his childhood.

7.5 Results

7.5.1 Process of partner choice

The focus group discussions concentrated for a large part on the period when the participants met their partner and started a relationship. For the older participants, this was 40 to almost 60 years ago, while for the younger ones it ranged from two to 13 years back.

Both younger and older participants indicated that meeting a person and possibly forming a relationship with this person is a process with no prior explicit preferences, no search strategies or influence from others. This is in contrast to the theoretical insights which on the whole assume that people have explicit partner

preferences. Actually, none of the respondents had consciously searched for a partner; they all claimed that they 'just met someone.'

Peter[42]	And well, if you go to a disco you are not … and with a group of boys, then you are not specifically looking for well eh … [others laugh], like 'I am looking for a 19-year-old girl who is like this and that.' No. Well … you just go out together and sometimes you come across someone, and sometimes you get stuck with that person [others laugh]. Well, yes!
	Group discussion with younger Vriezenveners

Many participants dated several others before they met the partner with whom they started a long-term relationship. The process of partner choice that emerged from these stories is one that is a gradually evolving, as echoed by the respondents; the relationship has to grow and blossom, which generally takes quite some time.

John	Then you met a girl, and then, well … 'Shall I take you home?' that was what we asked.
Susan	Yeah, well, that was a sign that there was some contact!
Margaret	That was the start, wasn't it?
Susan	That was the start! That was the start!
John	[is about to say something] I brought several [girls] home and that did not lead to anything! [all laugh]
Susan	Well, but it is a sign that you cared [about the girl]. If you said that.
Margaret	That's true! Then you did see some prospects.
John	Yeah …
Susan	'Shall I take you home?' Yes.
John	Smooching[43].
Susan	Smooching! [all laugh loudly]
	Group discussion with older Vriezenveners

7.5.2 Partner preferences

As mentioned in the previous section, respondents either said they hardly had any partner preferences at the time of meeting their partner, or they had much difficulty specifying what these preferences were, as indicated by the following discussion.

[42] Additional information by the researcher is indicated by [ ]. All first names are fictional.
[43] In the dialect: 'Snoev'n'.

Moderator	I would like you to go back in time to the moment that you met your partner. Do you remember what you were then looking for in a partner?
	[silence]
Astrid	No.
Susan	No. It happens to you I believe.
Margaret	There was a click or there wasn't. Well, how shall I put it?
	[silence]
Susan	Yeah … I think it is a very difficult question.
Margaret	When you see each other you get to know each other.
Astrid	[mumbles]. Well. It lasts or it doesn't last. Yes.
Susan and Astrid	Yes
Margaret	Well, how to explain that …
Susan	As far as that is concerned, there is not a lot of difference between then and nowadays I guess.
Margaret	But something specific? No, no.
Susan	At least in that area, no.
Margaret	At least not as far as I am concerned.
John	Yes, it's like that, like you say it.
Margaret and Astrid	Yes.

Group discussion with older Vriezenveners

The older participants generally felt that nowadays, people make much more conscious partner choices, especially those who search for a partner on the internet. They claimed that in 'the good old times' the partner choice process was much more romantic. Girls waited to be asked for a dance by a boy they did not know at all, whereas nowadays, according to them, it is geared too much towards selecting people with certain characteristics such as education and religion, as shown in the following excerpt:

Doris	But you did not think, like, we wanted to have someone or so.
Moderator	No.
Doris	No, it came automatically.
Vicky	You didn't look at education or whatever, or if they had a lot of money [laughter]

Doris	No …. But my husband thought: 'Gee that is a nice girl', and he talked to his brother about it, like 'Hey, that boy is dancing with a cute girl.'
	Group discussion with older Vriezenveners

The younger generation also hardly mentioned explicit partner preferences. As 30-year-old Lois said: 'It happens to you.' Even when asked unequivocally about possible preferences for age, educational level or religion, hardly any preferences were expressed. All lower educated respondents indicated that they did not care about the educational level of their partner, while the higher educated indicted that the difference should not be too large. The role of appearance at first sight was mentioned by a few younger women, although most stated that having a pleasant character[44] was the most important characteristic of a future husband. After a lot of probing, especially the higher educated indicated that it is important to be on the same wavelength, which is more likely when the educational levels are not too far apart and when both partners share a similar attitude towards life, especially concerning religious matters. When asked if it was important whether partners are similar, most respondents answered negatively. Some similarities are seen as nice and convenient in the relationship, but not really as necessary.

7.5.3 Social and cultural norms

All Vriezenveners, when asked whether others had influenced their partner choice, were very adamant that they were the only ones who had chosen their partner, and that no one else - parent, friends or the church had any impact on this decision whatsoever. However, when delving deeper into the topic, it became very clear that everyone was aware that the choice of the type of partner is formed by one's upbringing and social background.

Moderator	In that time, was your partner choice really your own choice? [silence] Or was there any influence from for instance parents, peers, other people? The church?
Margaret	Not in my case.
John	That of course depended on the choice you had made.
Moderator	Right. If the choice was deviant, then …
Margaret	Indeed.
Susan	Right! That's what I meant. It was of course, well …

[44] In Dutch: 'aardig zijn'.

John	I've said it before … well … I certainly would not have come home with a Catholic girl. You knew that. But otherwise I didn't have any problems.
Susan	No. But that could happen [all confirm by humming]. Those people were there. Really. Parents of course did have a lot of impact at that time. And I think you listened to them much more than nowadays. If you thought that your parents would not agree to something, then you just didn't start that. Right? Or you had to be madly in love … right? [others confirm by humming]. Yes! That's how things were.
	Group discussion with older Vriezenveners

In those days as well as nowadays, parents want to be able to assess the social status of the future in-laws. The construction of this status is based on the knowledge about the social origins of the family; their denomination and the place where they were from. In most instances, the first question of parents would be 'Which family is (s)he from?'[45]. As long as the parents assess the family status of the potential partner as reasonably good, they will not take action.

Peter	If you were to come home with someone from Westerhaar, then you immediately have some explaining to do!
Justine and Lois	Yes yes yes yes yes!
Justine	My dad would say that as well. Yes, really!
Lois	That person would sort of first have to prove him or herself.
Peter	Indeed.
	Group discussion with younger Vriezenveners

Especially the younger participants indicated that in the village, religion is very important, more so than in the surrounding villages. Most people marry within the church, which in most cases is the Dutch Reformed Church. Amongst the older generation, a mixed relationship of reformed Protestants with re-reformed Protestants or reformed Protestants with Catholics was not open to discussion whatsoever, as illustrated by 76-year-old John, who said 'I would never dare to bring a Catholic girl home.' 'Reformed and re-reformed, that was out of the question. The re-reformed, they were a different kind of people, according to many', said 63-year-old Vicky.

The quote 'a different kind of people' was mentioned very frequently, referring mostly to Catholics, the re-reformed, the rigidly orthodox Protestants and people from specific villages (see section 5.5), as well as to 'boyfriends with piercings or tattoos' according to younger female respondents. As revealed by the participants,

[45] In the dialect: 'Van wei is ze?'.

parents of the older generation had much more impact on the lives of their children, as the latter were more dependent on them, whereas the younger Vriezenveners have more freedom in their choices. However, 31-year-old Peter responded to the discussion in the following way: 'If I were to have brought a Catholic girl home, I am sure my father would have said: "Think thoroughly about it, boy!"', showing that religiously mixed relationships are still not commonplace.

Relationships where partners are of mixed religions are not only discouraged by parents, people themselves also indicated that a partner from the same church is the easiest option. The younger people in the group discussions were very conscious of the kind of problems religious differences between two people may cause, mostly issues concerning church attendance, the bringing up of children, and being on the same page 'in those matters'.

From the first group discussion onwards, it was obvious that the eyes of the village strongly influence daily life. As 23-year-old Justine stated: 'You are being watched.' For that reason, it was difficult when young people got romantically involved in the past. As soon as two people had been seen together, the news would spread across the village and to the parents. It was only when the girl or boy had visited the parents of his or her partner that the relationship would become official. News about Vriezenveners dating someone from another church or a notorious village would spread through town like wildfire. Vicky, 63 years old, said: 'I am from a business family and you would hear people talk in the store: "Did you hear already? That person is going out with a Catholic"'[46]. Although everyone does not know every other person anymore these days, the degree of social control is tremendous. As 17-year-old Erica said, 'You cannot do anything that goes unseen. It will be public knowledge [mumbles]. If one person knows, the other will know. At that rate it will spread across Vriezenveen and everyone will know.'

In the old days, some farmers' families tended to intermarry. According to the villagers, it was a way 'to keep the money together'. Especially farmers' daughters were popular, as they were thought to be good housewives. It literally happened to one of the participants, who was offered a neighbour's son as a husband, not once but several times: 'A neighbour came with his son to our house and said: "Do you know how much money my son has in his bank account?"'. However, she politely turned down the offer.

No one mentioned any explicit interference from churches, although relationships involving different religions were discouraged in various ways. According to 74-year-old Joe, 'religiously mixed relationships are not considered

[46] In the dialect: 'He'j 't al 'eheurd? Den giet met een Roomsen'.

proper in Vriezenveen'; it does not suit the village's traditional character, the sentiment was echoed by younger participants.

7.5.4 Opportunities to meet partners

A common meeting place for the older generation was at, in the words of some respondents, 'the girls' market', which covered a few streets around the church, where youngsters used to walk and hang out on Saturday evenings. Young men came by in cars to talk to groups of local girls. Some older people complained that there were hardly any other options for entertainment, while others emphasised the fun they had, such as 63-year-old Vicky: 'It was really a lot of fun. Mopeds, cars. It was like a market.' Some people also went to other villages; a park in the neighbouring town of Rijssen was mentioned the most, where those who gathered were mostly orthodox Protestants. At the Vriezenveen girls' market, not only locals joined in, but especially boys from other villages would come as well. One of the respondents met her future husband in front of her house, as it was located on the 'walking route'.

Moderator	Where did you meet her?
Joe	Here. In this neighbourhood. She was here. … the Kerkstraat, the Wethouder Potstraat, the Coöperatielaantje. You remember, Hannah?
Hannah	For sure.
Joe	You remember?
Hannah	Yes, yes sure.
Joe	[incoherent] This was like the only street. The whole of Vriezenveen consisted of one long street, and that was it. For young people there was nothing. On the Platanenplein there was a bakery, Hospers. Well, you would go there Saturday evenings and buy a cake, or an ice cream. But that was all in Vriezenveen
Moderator	Mmm.
Joe	There was no disco, there was nothing. We had to entertain ourselves in this neighbourhood [points outside].

Group discussion with older Vriezenveners

In the course of the 1960s, the girls' market as a meeting place was replaced by dance evenings in two local halls, each of which featured a band on alternate weeks. In later years, youngsters also went to dances in other places, nicely illustrated by Vicky, who stated 'If you wanted to let your hair down, you had to go to another place.' Transport to these places was usually by train or a lift from youngsters who had a car.

In recent years, young people still meet frequently on Saturday evenings, at discos in nearby villages. Other popular meeting places are local festivities and church-related activities. The local pubs and so-called '*keten*' (self-built sheds or caravans which are quite popular for drinking among young people, see Haartsen and Strijker 2009) are not seen as meeting places; the pubs are mostly populated by confirmed bachelors and men from either of the two football clubs after their canteen closes. The village has numerous voluntary associations and sports clubs, but these were never mentioned as places where potential partners met, apart from the korfball club, given that it is a mixed gender sport. Many participants think that increasing numbers of people meet through the internet. According to the younger generation, that is especially an option 'if you are afraid to be left on the shelf' (Justine, age 23) or 'for the second round' (Peter, age 31).

Both the older and the younger respondents were used to going out in groups, with their peers, with people of the same denomination and background. Meeting places are somewhat socially differentiated. Especially Protestants and Catholics used to have different social networks and different places of entertainment. Vicky, 63 years old, even mentioned 'We never went out in the Catholic area. As a precaution.' Protestants hardly came into contact with Catholics. Nowadays, networks are less rigidly demarcated, although there is still a division arising from attending different high schools and also different discos. Some younger participants mentioned that even in discos, Vriezenveners mainly socialise with fellow villagers, and especially not with people from the towns of Westerhaar and Vroomshoop. According to 27-year-old Rose, Vriezenveners do not hang out with these people, as 'in some way it is acquired or innate: it's not done, you don't do that.' Many locals actually find a partner from Vriezenveen at discos (nowadays) or dances (in the past) outside the village.

The group of rigidly orthodox Protestants deserves special attention, as they are seen as a completely isolated group, who have their own meeting places for partners. There are two churches that together make up this group, the 'Gereformeerde Gemeente in Nederland' and the 'Hersteld Hervormde Gemeente'. Children go to church-affiliated primary schools in Vriezenveen itself and to reformational high schools far away from the village. Lois, a 30-year-old woman, said: 'Even though they lived next to us, we never played with them when we were small', indicating the social isolation of the group. They are referred to by the streets where their churches are located, namely 'the Bouwmeesterstraat' and 'the Almeloseweg'. They are also called the 'zwartekousenkerk', after the black stockings worn by the older women attending church. The group is perceived as separated, isolated and different, as 'a different kind of people' (Peter, age 31). Although none of the participants in the group

discussions belonged to either of the two churches, all of them knew people who did. As stated by the respondents, the rigidly orthodox Protestants meet partners in their own schools, associations and pubs (there are several in the region), religious excursions, outings, programmes and through advertisements in a newspaper of their own denomination, as related by Joe in the following excerpt.

Joe	Martin came to our house, and then Helen [Joe's wife] asked him: 'How did you find this woman?' 'From the newspaper[47]!'
Moderator	The newspaper?
Joe	They have a newspaper. Well, he had a woman from Zeeland. You see, in Zeeland you also have this kind of people, you see.
	Group discussion with older Vriezenveners

This example indicates that most people in these groups look for partners 'of their own sort', as described by 63-year-old Vicky. Partners are usually found within the same denomination, but often from outside the village. The Dutch Reformed Church also has some parishes that associate with orthodox Protestantism, whose members also go to the same '*refo-café's*' (pubs for reformational followers).

7.5.5 Connotations about people from other places

Figure four shows a map depicting the perceptions of the focus group participants about people from neighbouring places. To the north of Vriezenveen, connotations of Vroomshoop and Westerhaar are very negative. In the past, Westerhaar was a village of peat labourers, while Vriezenveen was a village of farmers. The village was truly poor at some time; 'inferior' and 'a class difference' according to 76-year-old John. In the course of time, social differences decreased, but the mental associations remain, because of close ties between the villages. As mentioned previously, parents would be unhappy if their son or daughter were to come home with a partner from Westerhaar, and especially if they had certain surnames or came from certain notorious neighbourhoods.

Justine	Once there was Luke whom I dated for three months. Well, this is how it went …. [imitates discussion with father] 'I have a boyfriend'. 'Oh, who is it?' 'Luke.' 'Where is he from?' 'Well, he is from Westerhaar.' [shouts] 'WESTERHAAR?' [others laugh]. 'Yes, Westerhaar.' 'But his father is from Vriezenveen you know.' Well, then it was fine again [laughs]. No, but it does happen, you know.
	Group discussion with younger Vriezenveners

[47] In the dialect: ''t Krèèntie'.

Figure 4. Vriezenveners' mental associations of inhabitants of neighbouring towns

Vroomshoop also suffers from a very negative image. Its nickname is 'the Black Hole' - which actually refers to one part of the village - and the area is known to Vriezenveners by its inhabitants who are alleged to be knife fighters and dodgy traders. Sharing the same reputation as Westerhaar, Vroomshoop's inhabitants are thought to be inferior. Although the image is based on unflattering connotations in the past, in this day and age Vriezenveners would still not want a partner from Vroomshoop, as the latter are seen as a different sort of people, coming from a different culture than Vriezenveners themselves.

The third place with a negative connotation is De Pollen, a very small settlement just east of Vriezenveen. Older participants indicated that parents would not be pleased when their son or daughter had a boyfriend or girlfriend from De Pollen, as these people were thought to be poor, inferior, and from the lower classes. Younger people did not share these notions, although they identified people from De Pollen as a different kind of people.

The main Catholic part of Twente starts at the east side of Vriezenveen, in the town of Geesteren. As described in the previous section, Dutch reformed Vriezenveners do not usually socialise with Catholics and do not go to the same schools or places of entertainment. Although people from Geesteren are seen as pleasant and cheerful, their mentality is too much opposed to the Vriezenveen culture, which is perceived as much more traditional. A main difference between the two villages is that in Vriezenveen the Sunday rest is respected by many, while it is hardly the case in Geesteren.

Justine	Well, a friend of mine, she is from Geesteren [laughs]. She lived here, in Vriezenveen…
Peter	Right.
Justine	Well eh ... when she just lived here for two weeks, she thought, on a Sunday, well, my windows are really dirty, I am going to clean the windows on Sunday. But the whole neighbourhood criticised her so much, like how on earth could she think of cleaning her windows on Sunday. She said 'but they do that in Geesteren as well!' 'Well, you don't live in Geesteren, do you? You live in Vriezenveen, and that is not a proper thing to do on Sundays!' Well, she moved back to Geesteren.
Moderator	Really?
Justine	Half a year ago they moved. But if you go to Geesteren, anything is possible [people laugh]. If you drive through Geesteren on a Sunday, the outdoor cafes are packed!
Peter	You know, that is what I meant before: I would never marry a Catholic girl, because there [meaning Catholic areas] anything is possible!
Justine and Lois	Yes, that's true! That's true!

Group discussion with younger Vriezenveners

Participants hardly spontaneously mentioned Almelo, the closest urban centre. When asked about the perceptions of people from Almelo, participants reacted promptly that city folk are not appealing to Vriezenveners whatsoever, because they are viewed as people with a very different mentality. As 27-year-old Rose stated 'It's just a few kilometres, but a world of difference.'

Villages that were mentioned that in theory could provide potential partners for Vriezenveners were Den Ham (just to the west of Vroomshoop), Daarle and Wierden, although some participants called inhabitants from Wierden 'stuck-up people'.

Discussion participants viewed Vriezenveen as an old-fashioned village with traditional people. One knows where one stands with other people; and everything is 'easy and familiar'. As 31-year-old Peter concluded: 'There is actually no alternative for Vriezenveen.'

7.5.6 The meaning of distance

The previous sections have already touched upon the implications of distance in partner choice. A partner from close by is seen as convenient, familiar and trustworthy. In the past, there were no other options than a partner from very close by. However, in spite of higher mobility, the younger generation still prefers partners from their own village. The discussants associated fellow villagers as people with similar mentality and culture, as illustrated by the words of 63-year-old Vicky, 'The same background, things from childhood … which you recognise in each other.' Younger participants stressed that customs, traditions, and dialect are all different when you have a partner from a different place, causing difficulties in the relationship. The following quote is from Vicky again, recalling a village gossip in the store of her parents: 'Then the news spread: "He has someone who speaks high Dutch![48] …. But apparently she is quite nice"', indicating the idea that people who do not speak the dialect must be a very different sort of people as well.

Nevertheless, some of the older participants had also dated people from further away. Susan (aged 66) was in a relationship with a soldier from Drenthe, with whom she could only communicate through letters. She once met him at the Almelo railway station, which she had reached by bike, but unfortunately she was seen by a neighbour, who immediately told her parents. The relationship did not last. John, 76 years, met an interesting girl from Meppel (about 60 kilometres from Vriezenveen) at a wedding, and reported the following.

John	And she [his mother] told me: 'That girl lives in Meppel! How on earth will you manage?'
Susan	That is very far away.
John	How would I get there? Because I was a farmer, I needed to milk the cows every morning and evening, so there were no options.
Susan	Right.
Margaret	Just like you said [to John], really. They would say 'That will wear off'.
John and Susan	Yes

[48] In the dialect: 'Den hef d'r iene, den prut Hollands!'.

John	Right.
Susan	It will lead to nothing.

Group discussion with older Vriezenveners

Long-distance relationships were not acknowledged as possible long-term solutions by young Vriezenveners; only as a temporary option. Living close to relatives and friends was seen as pleasant, as illustrated by 27-year-old Rose: 'Having a cup of coffee with my mother is just five minutes away'.

7.6 Conclusions and discussion

Comparing the body of literature on partner choice to our findings on our study in Vriezenveen, we can conclude that partner choice is indeed subject to distance decay. Moreover, local cultural factors influence the degree of spatial homogamy: the perceived superiority of Vriezenveners over other villages, the alleged mentality and culture of others, their religion or denomination, and the degree of urbanisation. This is consistent with Van Poppel and Ekamper's (2005) contention that people prefer culturally similar partners, although in the current study respondents emphasised the type of persons they would not consider as potential partners, instead of unequivocally describing their partner preferences. Vriezenveners describe themselves as a kind of people who do not explicitly express themselves, and they also do not seem to be aware of the preferences they do have, given their descriptions of the partners they would not consider. Villagers claim to not consciously look for a partner, but that they happen to meet someone. Only the younger generation, after some serious probing, indicated that in a relationship it is important to share the same (religious) attitude to life.

The spatial pattern of partner choice of Vriezenveners, as constructed using register data on new cohabiters from Vriezenveen in 2004, showed that most villagers find their partner from close by. The stories of the villagers gathered from research in 2009 illustrate these patterns. Vriezenveners prefer partners from Vriezenveen as they are perceived as familiar and trustworthy. This is very clear evidence of the spatial dimension of partner choice. There are a few small disparities when the map based on register data is compared to the map based on participants' connotations of people from other places. To the north, inhabitants of Vroomshoop and Westerhaar are perceived very negatively. However, there are some Vriezenveners who choose their partner from these places. The observation that not many partners are found to the south-east of the village, is in line with the finding that the Vriezenveen Dutch reformed do not socialise with Catholics, nor would they prefer them as partners. Furthermore, from the register data, a partner link between Vriezenveen and Rijssen was found. Rijssen is generally assumed to be part of the Bible belt, and is known for its orthodox Protestant community.

From the focus groups, we found that the more orthodox Vriezenveners tend to go to Rijssen indeed; in the past people went to the local park to meet potential partners, and nowadays to the popular 'refo pub' in the village.

Regarding social and cultural norms, Vriezenveners do not seem to perceive the influence of others on their partner choices. However, everyone knows exactly what characteristics are considered undesirably by parents and others in the village, and they also act on this knowledge. Most Vriezenveners have a partner from the same church, though the perceived reasoning differs from Kalmijn (1998) who attributes more explicitly the power of the churches in meeting their goal to reduce religious intermarriage. Because of the omnipresent eyes of other villagers, Vriezenveners tend to make safe partner choices. The safest choice is a partner from nearby, preferably from a reputable family, and from the same church. Of primary importance is the partner's place of origin, closely followed by the alleged status of the family of the candidate.

The opportunities to meet partners have increased enormously in the course of one generation. The older generation, who met partners in the 1950s and 1960s, basically met their partners in the village, and mostly in the so-called 'girls' market' which covered a few streets around the church, where young people from the village and surrounding towns would hang out and meet potential girlfriends and boyfriends. For most villagers, due to the lack of transport means, there were no other places to go to. Besides, other potential meeting places such as schools or workplaces were often segregated by sex. At present, most partners are still found at places of entertainment that are located in neighbouring villages, at local festivities and at church activities, the latter as a result of the high share of the population who are active in parish affairs. Meeting places are somewhat socially differentiated, mostly because of the different social networks of Protestants and Catholics. This was more pronounced in the past, but it still continues today.

The rigidly orthodox Protestants stand out as a separate social group in Vriezenveen, who find partners at their own meeting places which are often outside Vriezenveen, at so-called 'refo pubs', camps, exchanges, through their own newspapers and other church-related activities. Consequently, partners are often found in other (Bible belt) villages, which can be quite far from Vriezenveen. Unfortunately, we could not include participants from these groups, which would probably have shed more light on the process of partner choice in a small secluded group.

Reflecting on the chosen research method, the choice of focus groups turned out to be appropriate, since they provided a very good opportunity for people to talk about partner choice in their village and to add to each other's views, resulting in a genuine understanding of the process of partner choice in

Vriezenveen. Although it was difficult to find people who were willing to participate, those that did participate did so actively and told the moderator their intimate stories. A wide range of views on partner choice was disclosed, and the researcher noted that saturation of the data was achieved. Given the difficulty in participant recruitment, the total number of participants was lower than anticipated, and the participants were quite similar in that they were all Dutch reformed, found a partner at a relatively young age, and on average were lower educated. It is difficult to assess whether this selection has affected the results. A positive aspect of the smaller number of respondents was that it was actually pleasant to have smaller groups to discuss the topic, as it gave each participant enough opportunity to share their personal stories and those of others they knew. A disadvantage was that most participants knew each other, which may have prohibited them from speaking more freely. The reticence of the community was not a complete surprise, as it is common knowledge that Vriezenveners hardly participate in surveys or studies (Kroese 2009). This probably stems from the history of the village, a history in which it was isolated for centuries. Van der Borgh (1905) wondered how it came to be that Vriezenveners had initiated trade with Russia and exclaimed: '[Saint] Petersburg and Vriezenveen! The metropolis and the agricultural village, isolated from the world!' (p. 710). In the early twentieth century, the same author described Vriezenveners as 'being very firm in their religion, having a certain resignation to their often difficult and meagre subsistence, great simplicity in their way of life, admirers of the royal family, are their main characteristics' (p. 710)[49]. Evidently, today's Vriezenveen hardly resembles this picture. However, the firm adherence to their religion still remains and the unawareness of preferences or norms regarding partner choice as found in the current study is not disharmonious with Van der Borgh's description either.

The stories from the Vriezenveners in the study throw light on how partners are chosen, what influences the place where partners were chosen, and they illustrate the patterns found in the quantitative part of this research project. They give an insight into the role of geographical distance in the process of partner choice. According to modernisation theories, social openness tends to increase in time, due to greater individual autonomy and widened horizons (Hendrickx 1994; Smits 1996). Beekink et al. (1998) argue that these processes lead to a decreased preference for a partner from the own group, whereas characteristics such as educational level and occupation tend to become more important (Van de Putte 2003). Based on this study, we do not find evidence for such a development, just as Van de Putte (2003) did not find empirical evidence for increased social openness

[49] Original wording: 'Vastheid in 't geloof, een zekere berusting in hun meestal moeitevol en karig bestaan, groote eenvoud van leefwijze, vereering voor 't Oranjehuis, zijn hunne hoofdkenmerken'.

in Belgium. In Vriezenveen, geographic origin is still a factor of great importance in partner choice.

The choice of Vriezenveen as a case study in a study on partner choice in the Netherlands has shed light on the importance of religion and local cultural differences in intimate social interaction. Partner choice in this village might be specific as the local circumstances are specific; however, it might well be a representative study for other rural areas as well, areas where traditions and customs are maintained and mental associations about neighbouring areas remain for decades.

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8 CONCLUSIONS AND DISCUSSION

This dissertation has focused on the spatial dimensions of partner choice. The combination of data and methods reveals patterns of spatial homogamy, explains its correlates, and contextualizes and illustrates them as well. The approach was both exploratory and explanatory. In chapters 2, 3, 4 and 6, register data on the whole population of married and unmarried cohabiters and their partners, including relevant demographic, socioeconomic and spatial characteristics retrieved from linked registers was used, to examine spatial homogamy and its determinants in the Netherlands. The richness of the micro data enabled the conduct of a spatial micro model of partner choice, which disentangled the spatial dimension in partner choice from other dimensions. Given the interest in all spatial dimensions of partner choice, spatial data analysis was used to explain regional patterns of spatial homogamy and spatial heterogamy, for which the micro data was aggregated. In addition to these valuable insights, multinomial logistic regression on survey data was employed to understand the social differentiation of meeting places, showing the assortative nature of the process of meeting partners. Finally, focus group discussions provided insights into how partners are chosen in a rural village in the east of the Netherlands, and what distance means in this process. The following sections summarize and discuss the results.

8.1 The importance of spatial dimensions of partner choice

Geography does matter. Distance decay is highly relevant in partner choice. Dutch cohabiters find their partners at very short distances. Chapters 2, 3 and 4 have demonstrated that half of all partners lived within a 6-kilometre distance before cohabitation; a third of all partners lived in the same municipality. The extent of

spatial heterogamy, or the proportion of partners chosen from abroad is found to be four percent. During the life course, future partners increasingly start to live closer together. At birth, a fifth was living in the same birth municipality; on average partners then lived 44 kilometres apart. Five years prior to cohabitation the average distance to partners had decreased to 27 kilometres, whereas just before cohabitation partners on average lived 23 kilometres apart. Based on these statistics, the first part of the first research question: 'What is the level of spatial homogamy in the Netherlands?'is answered.

Another spatial dimension of partner choice reported in this dissertation is the existence of regional variation in spatial homogamy. Chapter 3 reported that geographical distances to partners are exceptionally large in peripheral areas and areas with low population densities. It also established that conditional on these factors, partner choice in these regions is not different from other regions. Spatial homogamy is especially pronounced in Bible belt areas, with the municipality of Urk having the shortest distances to partners: 50 percent of people find a partner within 800 metres and 84 percent choose a partner from the same municipality. In addition, partners tend to be found near by in cities and in the north and east of the Netherlands. On the other hand, distances are larger in the west. The spatial pattern of those choosing a partner from abroad reveals that this is more common in big cities and in the southern part of the country, while it is quite exceptional in the northeast, as concluded in chapter 4.

Another spatial dimension of partner choice was established in chapter 5, which focused on the meeting places of potential partners, and concluded that the use of space is socially differentiated. Partners with the same background meet in similar places. Local partner markets are segmented by demographic, socio-economic, socio-cultural and spatial characteristics of the potential partners going to these places.

The importance of spatial homogamy among other types of homogamy was the topic of investigation in chapter 6, which employed a spatial choice model using random utility theory to test whether spatial homogamy is still important when controlling for demographic, socioeconomic and cultural homogamy as well in partner matching. The results show that similarity concerning the place where partners live before they meet, and the similarity concerning their birth places significantly increases their matching probabilities, even when controlling for demographic (age, life stage), socioeconomic (educational level, labour market status) and cultural (dialect, local attachment and bible belt) homogamy. Spatial homogamy is thus of key importance in partnering, thereby answering the fifth research question: 'How important is spatial homogamy compared to other types of homogamy in partner matching?'.

8.2 Spatial homogamy varies across groups

The second part of the first research question, 'How does spatial homogamy vary across demographic and spatial characteristics of partners? ' was answered in chapter 2. Spatial homogamy varies with stage in the life course. Younger couples find each other at significantly longer distances than older couples, which is mostly congruent with existing studies (Clegg et al. 1998; Coleman and Haskey 1986). Decreasing distance with increasing age has mostly been associated with diminishing affluence (Clegg et al. 1998). Moreover, the household position that one has before partner selection influences the distances at which partners are found. These are new insights which have not been examined previously as far as we know. Single parents tend to find new partners at the shortest distances, and those living with their parents find their partners at shorter distances than those living alone or living in other positions. Marital status matters as well. The divorced find new partners at longer distances than those with other marital statuses, such as the unmarried, married and widowed. These findings suggest that one's stage of life influences one's spatial horizon. Having children appears to narrow the size of the spatial circle around the home, and a shrinking spatial pattern of activities at older ages can affect the distance at which a new partner is found. Additionally, in chapter 6 it was revealed that similar life stages also increase the probability of partnering. Matching probabilities are increased for combinations in which the woman is not older than the man.

Socioeconomic characteristics of individuals choosing a partner affect spatial homogamy as well. In a publication derived from chapter 2 (Haandrikman et al. 2008), the median distance to partners with more education was found to be 7.6 kilometres, while that of people with less education was 5.6 kilometres, a difference that was confirmed to be statistically significant. Similar results were found for the income of cohabiters; those with the highest incomes find their partners at the longest distances (Haandrikman et al. 2008). These results are consistent with findings from other studies in that people with higher socioeconomic status find their partners at greater distances (Clegg et al. 1998; Van Poppel and Ekamper 2005), and may be caused by a combination of preferences for similar partners who are not found near by, the norms to marry within the class, and the wider financial and other opportunities to meet potential partners. In chapter 6 it was established that, controlling for other kinds of homogamy, individuals tend to choose partners in the same socio-economic class, applying not only to educational level, but also to labour market status, which is a new finding.

Spatial homogamy also varies by spatial characteristics of partners. In chapter 2, geographical distances to partners were found to decrease with increasing degree of urbanisation. High concentrations of people, jobs and educational

opportunities lead to increased spatial homogamy. In peripheral areas with fewer potential partners in close proximity, distances to partners are greater. It was established that distances to partners are shorter in areas with one or usually all of the following characteristics: areas belonging to the Bible belt, areas that are religious enclaves, areas where people actively speak unusual dialects compared to the surrounding area, and areas which are generally perceived to be reasonably closed.

In the introduction of the dissertation, three determinants of spatial barriers in partner choice were suggested, of which the first were compositional effects of the population. Based on the findings described above, demographic and socioeconomic characteristics of individuals choosing a partner are found to affect spatial homogamy.

8.3 The explanations of regional variation in spatial homogamy and spatial heterogamy

The second and third research question were answered in chapters 3 and 4. Both deal with the explanatory factors of spatial variations in the distance between partners. In chapter 3 the dependent variable was the standardized distance coefficient, as defined in chapter 2, whereas short distance homogamy and spatial heterogamy were modelled in chapter 4.

Chapter 2 introduced the spatial homogamy coefficient (the 'standardized distance coefficient' in chapter 3) which corrects the average distance to partners for residential location and population size. In chapter 3, this coefficient was modelled in a spatial regression, and degree of urbanisation was found non significant when controlling for other compositional factors and local cultural differences. This result might be due to the specific definition of the coefficient. In a weighted regression analysis in chapter 4, increasing degree of urbanisation was found to positively affect short distance homogamy. Moreover, it was found that the greater the size of an area, the higher the proportion of partners found in that area. Thirdly, living in a border area increases the extent of spatial homogamy and decreases the level of spatial heterogamy. Thus, short distance homogamy is largely explained by geographical factors.

The spatial distribution of spatial homogamy and spatial heterogamy is also influenced by compositional features of the population that are spatially segmented. In chapter 3 no effect of demographic characteristics was found, that is, the availability of potential partners in the most common age range for partner choice does not affect spatial homogamy. On the other hand, socioeconomic attributes were found to be of key importance. In areas with concentrations of people with lower socioeconomic status, partners tend to be found close by. The

higher the proportion of people with higher educational levels and those with a high income, the lower the extent of spatial homogamy. The reasons are probably related to the reasons why those with higher levels of education and financial affluence find partners at greater distances; a more global orientation and more means to travel. A compositional effect that is found to positively affect the degree of spatial heterogamy is the proportion of immigrants in the population, both from western and non-western descent. In summary, while regional variation in short distance homogamy is primarily governed by geographical determinants, demographic indicators are by far the most important determinants of spatial heterogamy.

From the explorative spatial analysis in chapter 2 it was deemed important to include regional cultural differences in the explanation of patterns of spatial homogamy and heterogamy. Given the description of areas in which partners on average find partners at shorter distances, as established in section 8.2, chapters 3 and 4 examined the effects of the local cultural variations of dialect, religion and different value orientations on spatial homogamy and spatial heterogamy. Unfortunately, religion of Dutch inhabitants is not registered, and consequently religion was approximated by another indicator, the Protestant conservatism index. In chapter 4 it was found that the higher the Protestant conservatism index, the higher the extent of spatial homogamy and the lower the degree of spatial heterogamy, just as expected. However, in chapter 3, no effect of Protestant conservatism on the standardized distance coefficient was found. Part of this result might be related to the definition of either variable. The results for dialect are mixed. In chapter 3, no support was found for speaking a dialect as an explanatory factor for spatial variation in spatial homogamy. However, living in the Frisian-speaking area of the Netherlands leads to increased short distance homogamy, as established in chapter 4. Furthermore, choosing a partner from abroad is avoided in the Frisian- and Low-Saxon language areas. The third local cultural aspect that was taken into account are the value orientations of people living in different regions. This was done by including two explanatory factors as indicators for regional culture created by Brons (2006), namely post-materialism and classic individualism. Based on modernisation theories, higher scores on these indices were expected to lead to greater distances to partners. Chapters 3 and 4 showed mixed results. Consistent with our expectations, the standardized distance coefficient is smaller with increasing values of post-materialism and classic individualism. The latter also leads to less short distance homogamy and increased spatial heterogamy. However, we found no effect of post-materialism on spatial heterogamy and a positive effect on spatial homogamy. This is an unexpected finding, for which we have no explanation at present.

Adding to the results from the spatial analyses in chapters 3 and 4, chapter 6 found that cultural homogamy increases the probability of partnering. Both speaking Low Saxon and especially Frisian leads to higher chances of matching, but both not speaking a dialect decreases the chance of union formation. Furthermore, a match is more likely when both partners live in areas with similar degrees of local attachment, as measured by the share of the population voting for local parties. Equally, living in similar regions in terms of voting for Christian democrat parties also leads to increased matching probabilities.

The main conclusion about the importance of local cultural differences on spatial homogamy and spatial heterogamy is that cultural proximity is fostered by religion, language and value orientations, and that speaking the same dialect, going to the same church and living in the same cultural surroundings leads to higher chances of matching with a partner found near by. In places where the community is fairly closed, the extent of spatial homogamy is substantial. A characterization of the areas with the shortest distances to partners runs as follows. These areas are often (former) fishing villages, where traditional costumes were worn frequently until recently and where fertility is high (up to a TFR of 3.1 in Urk). On the other hand, in areas with high numbers of individualist inhabitants, social circles are wider, people attach less importance to the place where they live, and partners are found at greater distances.

8.4 The matching mechanisms of partner choice and the social differentiation of meeting places

Throughout the dissertation, sociological theories on partner choice were used to understand why individuals choose partners at certain distances. The first part of this section connects the three determinants of partner choice: preferences, norms and opportunities (Kalmijn 1991a; Van de Putte 2003), to the choice of a partner at short distance, in order to understand the matching mechanisms of partner choice. One of those mechanisms is the meeting place. The second part of this section will answer the fourth research question: 'Where do partners meet and are meeting places socially differentiated?'.

This dissertation has found that people tend to find geographically similar partners. The choice of a partner who is from the same region is in part a consequence of the preference for a culturally similar partner, as was described in section 8.3. This is consistent with Van Poppel and Ekamper's (2005) study in which it was argued that the preference for a culturally similar partner instigates the choice of a partner from the same or a related region, given the often shared language, religion, and family values. Similarity is seen as attractive since sharing the same values, ideas and life style confirms each other's behaviour and

worldviews (Kalmijn 1991a). Chapter 6 found evidence of the importance of spatial homogamy in partnering, although on the basis of the spatial micro model it cannot be ascertained whether this is the result of preferences, norms and/or opportunities.

Chapter 6 also established that cultural homogamy, defined as dialect homogamy, local attachment homogamy and Bible belt homogamy, increases matching probabilities. It seems plausible to assume that for individuals belonging to certain cultural groups, especially those based on denomination or religion, partner choice occurs more often within than outside the group, also influenced by group norms. As cultural groups are clustered in neighbourhoods and regions, social and cultural norms to choose a partner within the group contribute to spatial homogamy.

The opportunities to meet potential partners are spatially arranged. Spatial homogamy is more obvious in areas with higher densities of people, jobs and other institutional arrangements that increase meeting opportunities, as found in chapters 2 and 3. The chances to form a relationship are simply greater with people whom you meet more often. As similar people tend to cluster in space, this also leads to an increased chance to partner with a person similar to oneself. In chapter 5 we found that partners are met in local marriage markets, segmented by relationship career, education, age, religion and geography. A typology of meeting places was applied to survey data on how and where partners are met. Most people meet their partner in a public place (such as bars and places of entertainment), while one-third finds their partner in a closed place (for instance in schools and workplaces), and one-fifth meets in a private place (such as through family). The number of meetings in closed places is increasing, while the share of meetings in private places is decreasing slightly and meetings in public places have declined sharply. Partners who meet in public settings tend to be young, Catholic, have a lower level of education, and have grown up in rural areas. A slightly smaller but increasing number of people meet their partner in closed places. The characteristics of this group are: young adult, higher educational level, partners in the repartnering market, of re-reformed denominations, have grown up in an urban area. By contrast, those who meet their partner in private places tend to be more often Muslims, have a lower level of education and have grown up outside the Netherlands. Use of place is thus socially differentiated. The segmented way in which the partner market functions is created by the partners who operate in it. They are motivated by preferences, restricted by group norms, and they live their lives in certain places and among certain people, or in other words, they create their own opportunities and constraints to meet partners.

Areas with inhabitants with a more individualistic outlook tend to find partners further from home (chapters 3 and 4). Increased affluence, travelling possibilities and the tremendous number of possibilities offered by the internet, provide the opportunity to find a partner whom one would probably not have met without these technological advances. At present, four percent of partners are found abroad, part of which are probably found through the internet.

Although we have provided useful insights in the matching mechanisms of partner choice, we can at best infer which underlying mechanisms have lead to the outcome that was studied: a certain distance at which a partner was found and the place where a partner was met. Unfortunately, the register data set did not provide information on where partners were met, and the physical spatial component of meeting places was not available in the survey data, thus the influence of the spatial pattern of institutional contexts that increase meeting probabilities on spatial homogamy could not be assessed in a straightforward manner. However, the qualitative case study did provide more insights into the matching mechanisms of partner choice, which is described in the following section.

8.5 The meaning of distance in partner choice

The sixth research question reads as follows: 'How do people select a partner, and how is geographical distance incorporated in the preferences, norms and opportunities that lead to partner choice?'. Chapter 7 dealt with this question, employing a qualitative approach. Partner choice and its spatial dimensions was the topic of focus group discussions that were organized in a Dutch village. The case study was chosen based on the conclusions from the preceding papers, and the study was designed in order to answer questions that remained after the other papers had been completed. Given the interest in the influence of local cultural differences on partner choice, the village of Vriezenveen was selected as its local cultural set-up differs from the surrounding area, concerning the role of religion and the deviating dialect.

The chapter found that Vriezenveners view a partner from close by as convenient, familiar and trustworthy. Convenience suggests that a short distance to a partner is practical in the sense that it is easy to see the partner (for instance by going to him or her by bike), that the family-in-law is close by (which is nice so that family can be visited frequently), and that no time is lost travelling. Familiarity and trustworthiness imply that a potential partner's background and family is known when the partner is from near by, as their families are mostly (well-) known in the village, and that the fact that a partner is from the same village must imply that that person is from the same culture and has the same

mentality. Based on these measures, partners from the same place are trusted, and others are distrusted at first. Similar cultural values create an identity that gives people a sense of belonging, which is needed as a basis for a relationship (Kalmijn 1998).

It is not just distance alone, but also the perceived mentality and culture of other places that influences the distance at which partners are found. Though they might be located at very short distances, places with inhabitants with deviating religious denominations, alleged different mentality or culture, cities, and places perceived as being inferior were not considered potential 'breeding grounds' for partner identification, as people from these places were seen as 'a different kind of person'. Going back to the introduction, these local cultural differences can be seen as forming spatial barriers prohibiting partner choice (figure 1 in chapter 1). The spatial connotations about the geographic origins of potential partners thus affect partner choice; these associations were shared by the community and hardly changed across generations.

Coming back to the matching mechanisms of partner choice, the qualitative case study revealed the following preferences, social and cultural norms and opportunities to meet partners. As mentioned, partners from the same village or culturally related places were preferred by the villagers, although the type of persons whom were not considered as potential partners was emphasized. Explicit partner preferences were hardly mentioned; only the younger generation indicated that it is important to have the same attitude to life. Attitude to life is a difficult concept to define, but education level is generally seen as an important marker for moral and political values (Hyman and Wright 1979), and educational homogamy generally enables partners to develop a common life style in marriage (Kalmijn 1991b).

Regarding social and cultural norms on partner choice, the qualitative case study found that deviant partner choices were criticized by fellow villagers. The level of social control is very high in Vriezenveen, and participants indicated that they avoid deviant behaviour, such as interfering with the Sunday rest, and choosing a nonstandard partner. It therefore seems evident that norms on the geographical origin of potential partners do affect the choice of a partner. Nonetheless, when asked whether others influenced their partner choice, interviewees were very adamant in that they were the only ones who had chosen their partner, and that no one else had been involved in that decision. However, during the focus group sessions, it became obvious that everyone was aware that deviant choices would have caused problems.

Proximity increases the likelihood of spontaneous social encounters between people that offer opportunities for interaction, as stated in chapter 2. In the past,

most partners were found nearby as most people hardly travelled far away from home. Opportunities to meet partners then were more limited than nowadays. In Vriezenveen in the 1950s and 1960s, many partners were met at the so-called 'girls' market', which covered a few streets around the church, where young people from Vriezenveen and neighbouring villages would hang out and meet potential girlfriends and boyfriends. These days, most partners are found at places of entertainment which are located in other villages. However, most young people tend to socialize with fellow-villagers; hence the probability of spatially homogamous relationships is large. In addition, meeting places are also somewhat differentiated by religious denomination, mostly because of the different networks of Protestants and Catholics.

Summarizing, the qualitative case study has thrown light on how partners are chosen, what influences the place where partners are chosen, and they illustrate the patterns found in the quantitative studies. Moreover, they give an insight into the meaning of distance in partner choice.

8.6 Spatial homogamy and modernisation

As indicated in the introduction, the spatial dimension of partner choice gives an indication of the extent of contact between groups. Use of register and survey data in this current research did not allow a longitudinal perspective, but did provide a cross-sectional picture of the role of geographical distance in present-day Netherlands. Therefore we can not make statements about societal changes, but can only infer what our findings mean compared to much older studies.

There are a number of factors that point to a relatively closed partner market, based on our findings. These include the short distances between partners that were found in chapter 2, the increasing number of meetings at closed places established in chapter 5, and the short distances in areas with concentrations of people with lower education and low income, in Protestant conservatist areas and in Frisia (chapter 4). Moreover, partners from abroad are avoided in areas which are rural, located near borders, where dialect is important, which are Protestant conservatist, and in Frisia and the Low Saxon area (chapter 4). High rates of partner choice within the culturally defined group, which is often also spatially defined, is commonplace among the majority of the population.

Despite increasing mobility, enlarged opportunities to study and travel, the arrival of the internet, the expansion of the European Union, and other features of globalisation, the role of geographical distance in partner choice is persistent. Cultural borders in society are important in choosing a partner, based on our findings on value orientations, dialect and the Bible belt, indicating that group ties are important. On the other hand, the extent of spatial heterogamy may be on the

rise, also given the increasing share of immigrants in the population. Further research on the effect of endogamy and intermarriage on the openness or closeness of societies is needed to investigate whether social openness is on the decrease.

8.7 Future directions

A study on the spatial dimension of partner choice within the Netherlands may seem far-fetched by someone living in a country which is several times the size of these lowlands. Adding to that, there are hardly any physical spatial barriers within the Netherlands, since it is mostly flat and the differences between urban and rural areas are minimal as population densities are relatively high and equally distributed. However, this study found relatively large differences in geographical distances between partners for different demographic, socioeconomic, cultural and spatial groups. It would therefore be interesting to repeat the same research design in another cultural context, with larger differences between people and regions, to examine its effects on spatial homogamy. As an increasing number of countries have population register data and since it is gradually made more available to researchers, this would be a great opportunity to compare findings.

Another addition to this study would be the availability of better data on religion, as this dissertation has made clear that religious denominations are, in many ways, very influential in the partner choice process. A better measurement of one's degree of religiosity could provide an in-depth understanding of the underlying mechanisms of partner choice. Furthermore, as we found that local cultural factors are important determinants of social behaviour, it would be interesting to study what determines spatial identity, and how spatial identity influences demographic and other types of behaviour.

Moreover, a logical continuation of this study would be to examine what happens after partner choice. Are spatially homogamous relationships more successful than spatially heterogamous ones? This should be possible using population register data.

This dissertation has shown that geography matters in partner choice. The importance of geography on other demographic topics would be a valuable addition. For instance, what is the importance of the birth place in an individual's life course? When people move, do they adapt to their new environment demographically or does one carry the demographic behaviour of the region of one's birth place as a marker through life? Possible applications include the type of union formation and fertility.

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APPENDIX: FOCUS GROUP QUESTIONING ROUTE

Introduction of research and researcher

Aim of the study: interested in how people choose a partner, with a specific interest in the geographic origins of partners. Importance of influence of the environment on partner choice is, and where people meet a partner.

Stress that participants are all Vriezenveners, are young/55-plus, and have met their partner in the last 10 years/have met their partner before 1980. All have undergone the process of choosing a partner. Emphasize that respondents may speak about their own experiences and those of their friends, acquaintances, family, and others in the village.

Consent

An oral consent should be taken from the participants before the start of each discussion. The permission for recording the session is also taken. Confidentiality of information is guaranteed.

Introduction round

Introduction round, in which all participants including the researcher reveal where they are born, where they currently live, where they met their partner, and where their partner is from.

Discussion

Preferences

I would like to go back in time with you, to the moment that you chose your partner.

At that moment, what were you looking for in a partner?

How important is it that partners have similarities, for a long-term relationship?

Which similarities are most important?

Probes:

- Age
- Life stage
- Educational level
- Religion
- Dialect
- Where someone grew up

Norms

According to yourself, was your choice of partner your own choice?

Or are there people or other things that influenced the choice of partner?

Which influence was most important?

Probes:

- Influence parents
- Influence friends
- Influence church
- Influence people from neighbourhood/ village

Meeting places

If we go back to the time when you chose your partner: where you then consciously looking for a partner?

If so, did you look for a partner at specific places?

And more generally, which opportunities were there to meet partners?

Probes:

- Bars, discos
- At school
- Sport clubs
- Church
- Associations/ clubs
- In the neighbourhood
- At work

- Through others
- Internet

Do you think that different people meet partners in different places?

Probes:

- Age
- Educational level
- Religion

The meaning of distance

Can you indicate how important you think it is that a partner is from the same region?

Why is important or not important?

Probes:

- Which villages are preferred?
- Which villages are not preferred?
- Villages/towns: Almelo, Westerhaar, De Pollen, Daarle, Vroomshoop, Hoge Hexel, Aadorp, Geesteren, Wierden
- What determines this region? (religion, dialect, type of community, city/countryside)

Would you have considered a partner from far away?

Probes:

- Practical issues
- Views of significant others

How important is it according to you that a partner lives close by when having a relationship?

How far do you think you would be prepared to travel for a partner?

Closure

Do you think that in the future, distance will be less important in partner choice?

SAMENVATTING

De geografische dimensies van partnerkeuze

Dit proefschrift gaat over de geografische dimensies van partnerkeuze in Nederland. Eerdere studies hebben aangetoond dat partners vaak gelijk zijn aan elkaar, wat betreft opleidingsniveau, beroep, sociale klasse, leeftijd en religie. Deze gelijkheid wordt homogamie genoemd. Ruimtelijke homogamie, of wel de gelijkheid van partners aangaande hun geografische herkomst, heeft weinig aandacht gekregen in dergelijke onderzoeken. Deze studie laat zien dat ruimtelijke homogamie een sleutelrol speelt in partnerkeuze. In zes artikelen is op verschillende manieren de ruimtelijke dimensie van de partnermarkt belicht.

Hoofdstuk 2 is een beschrijvende studie over de rol van geografische afstand in partnerkeuze in Nederland. Hierbij is gebruik gemaakt van gegevens uit het bevolkingsregister over alle mensen die in het jaar 2004 zijn gaan samenwonen. Door deze gegevens vervolgens te koppelen aan geografische coördinaten van de adressen van partners, konden de geografische afstanden tussen partners voor het samenwonen worden berekend. Uit het onderzoek blijkt dat Nederlanders hun partner op zeer korte afstand vinden: meer dan de helft vond zijn of haar partner binnen een afstand van 6 kilometer; een derde woonde in dezelfde gemeente. Gedurende hun levensloop zijn toekomstige partners steeds dichter bij elkaar gaan wonen: bij de geboorte woonden partners gemiddeld 44 kilometer van elkaar, 5 jaar voor het samenwonen 27 kilometer, en net voor het samenwonen 23 kilometer. Ruimtelijke homogamie varieert naar de demografische en sociaal-economische groep waartoe men behoort. Afstanden tussen partners zijn het kortst voor ouderen, voor mensen die voor het samenwonen bij hun ouders

wonen en voor lager opgeleiden. Langere afstanden komen vaker voor bij jongeren, alleenstaanden, gescheidenen en hoger opgeleiden. Bovendien bestaat er ruimtelijke variatie in ruimtelijke homogamie. Met toenemende stedelijkheidsgraad neemt de afstand waarop partners worden gevonden af. Concentraties van mensen, banen en onderwijsmogelijkheden leiden tot kortere afstanden tussen partners. Afstanden tussen partners zijn juist veel groter in perifere, dunbevolkte gebieden, terwijl ruimtelijke homogamie geprononceerd is in de Bijbelgordel, in steden en in Noord en Oost Nederland.

De regionale verschillen in ruimtelijke homogamie zoals die zijn gevonden in hoofdstuk 2 worden verklaard in hoofdstuk 3. In een ruimtelijke regressie is de 'gestandaardiseerde afstandscoëfficiënt' gemodelleerd. Deze coëfficiënt is gelijk aan de gemiddelde afstand tot partners, gecorrigeerd voor woonplaats en bevolkingsdichtheid, om te standaardiseren voor de gemiddelde afstand tot andere Nederlanders. Om regionale verschillen in de afstandscoëfficiënt te verklaren, worden drie soorten verklaringen meegenomen, gebaseerd op vorige studies: de samenstelling van de bevolking, ruimtelijke determinanten en regionale culturele verschillen. Hiervoor zijn verschillende bronnen gebruikt. Het basisbestand is het partnerbestand zoals beschreven in hoofdstuk 2. Gegevens over verklarende factoren komen uit regionale statistieken van het CBS en uit bestanden van de Informatie Beheer Groep met daarin informatie over gevolgde hbo- en universitaire opleidingen. Ook werden indicatoren voor regionale cultuur gebruikt. De analyse laat zien dat regionale verschillen in ruimtelijk homogamie met name worden verklaard door de sociaal-economische kenmerken van partners en regionale culturele indicatoren. In gebieden met een groot aandeel hoger opgeleiden en hoge inkomens worden partners aanzienlijk verder weg gevonden. Waarschijnlijk wordt dit veroorzaakt door een minder lokale oriëntatie van de inwoners, gecombineerd met de middelen om veel te reizen. Afstanden zijn ook groter in gebieden waarin mensen wonen met een hoge mate van postmaterialisme en individualisme. Deze bevindingen zijn in overeenstemming met de modernisatietheorie, die aanneemt dat grenzen tussen groepen minder sterk worden gedurende moderniseringsprocessen als de toename in onderwijsdeelname, mobiliteit en autonomie. Er werd geen onweerlegbaar bewijs gevonden voor een effect van dialect en religie op ruimtelijke homogamie.

Hoofdstuk 4 borduurt voort op regionale verschillen in de afstand tussen partners, en vergelijkt 'korte afstand homogamie', gedefinieerd als het vinden van een partner binnen de eigen gemeente, met ruimtelijke heterogamie, gemeten als een partner vinden in het buitenland. De regionale variatie in beide fenomenen wordt

met behulp van een gewogen regressie verklaard door middel van geografische, sociaal-economische, demografische en culturele determinanten. Regionale verschillen in korte afstand homogamie worden grotendeels verklaard door geografische indicatoren, in het bijzonder de grootte van een gebied, de stedelijkheidsgraad en of het gebied grenst aan België of Duitsland. Culturele verschillen tussen regio's spelen ook een rol bij verschillen in korte afstand homogamie. Homogamie is sterker in protestants conservatieve gebieden, in gebieden waar men minder individualistisch is ingesteld, en in Friesland. De belangrijkste determinant van ruimtelijke heterogamie is de samenstelling van de bevolking: in gebieden met een groot aandeel allochtonen is ruimtelijke heterogamie groter. In gebieden langs de grens is de mate van heterogamie juist kleiner, evenals in protestants conservatieve gebieden en in gebieden waar Fries en Nedersaksisch wordt gesproken.

De plek waar een partner wordt ontmoet speelt een centrale rol in het partnerkeuzeproces. In hoofdstuk 5 is gebruik gemaakt van gegevens uit het Onderzoek Gezinsvorming 2003 van het Centraal Bureau voor de Statistiek, waarin is gevraagd hoe en waar een partner is ontmoet. Het hoofdstuk laat zien dat ontmoetingsplekken sociaal gedifferentieerd zijn: partners met gelijke achtergrondkenmerken worden gevonden op lokale partnermarkten. Partnermarkten zijn gesegmenteerd naar relatiegeschiedenis, opleidingsniveau, leeftijd, religie en geografie. Ontmoetingsplekken werden ingedeeld in een typologie die een onderscheid maakt tussen publieke plekken (zoals uitgaansgelegenheden), besloten plekken (zoals scholen en werkplekken) en private plekken (zoals bij vrienden thuis). De meeste partners worden gevonden op publieke plekken. Dit betreft voornamelijk jongeren, katholieken, lager opgeleiden en mensen die op het platteland zijn opgegroeid. Een derde deel van de Nederlanders ontmoet zijn of haar partner op een private plek. Deze partners zijn vaker moslim, lager opgeleid en opgegroeid buiten Nederland. Een vijfde deel ontmoet elkaar op een besloten plek; zij zijn vaker jongvolwassen, hoger opgeleid, opnieuw actief op de partnermarkt, gereformeerd, en opgegroeid in de stad. Lokale partnermarkten ontstaan door de partners die erin actief zijn. Mensen worden in hun partnerkeuze geleid door voorkeuren, beperkt door sociale en culturele normen, en beïnvloed door de mogelijkheden om potentiële partners te ontmoeten.

Hoofdstuk 6 modelleert verschillende vormen van homogamie, om uit te vinden hoe belangrijk ruimtelijke homogamie is vergeleken met demografische, sociaal-economische en culturele homogamie bij het kiezen van een partner. Het model is gebaseerd op 'random utility', wat inhoudt dat individuen de (partner)keuze

maken die hen het meeste nut oplevert. De aanname is dat dit nut het hoogst is als partners veel op elkaar lijken in geografisch, demografisch, sociaal-economisch en cultureel opzicht. Een individu kiest een partner uit een groep alternatieven die geografisch verspreid zijn over het land. Het ruimtelijke keuzemodel gebruikt dezelfde register gegevens van nieuwe samenwoners als in hoofdstukken 2, 3 en 4, gekoppeld aan geografische coördinaten, sociaal-economische gegevens uit het Sociaal Statistisch Bestand, onderwijsgegevens van de Informatie Beheer Groep en verkiezingsuitslagen. Iedere partner is gekoppeld aan zijn of haar echte partner en aan zeven potentiële andere partners, om te modelleren waarom de echte partner is gekozen. De resultaten laten zien dat ruimtelijke homogamie de kansen op een partner match aanzienlijk vergroot, ook wanneer er rekening wordt gehouden met andere vormen van homogamie. Het afstandseffect is het grootst voor lager opgeleiden en partners die in landelijke gebieden wonen. Een andere nieuwe bevinding is dat culturele homogamie een stimulans is voor het vormen van een relatie, naast sociaal-economische, demografische en ruimtelijke homogamie.

In een deelstudie in Vriezenveen werd onderzocht hoe afstand een rol speelt in partnerkeuze. Gegeven de bevindingen uit de voorgaande hoofdstukken dat lokale culturele verschillen belangrijk zijn in het proces van partnerkeuze, werd dit Overijsselse dorp gekozen, dat in religieus en linguïstisch opzicht verschilt van het omliggende gebied. Hoofdstuk 7 laat de resultaten zien van onderzoek op basis van focus groep discussies, waarin werd besproken hoe dorpsbewoners een partner kiezen, wat hun voorkeuren zijn, hoe zij worden beïnvloed door anderen in deze keuze, naar welke plekken mensen gaan om mogelijke partners te ontmoeten, en wat de rol van afstand is in dit proces. Een partner van dichtbij wordt gezien als 'makkelijk' en vertrouwd. De vertrouwdheid wordt gebaseerd op het bekend zijn met de achtergrond en familie van een potentiële partner, en de wetenschap dat de partner uit hetzelfde dorp komt, en dus dezelfde cultuur en mentaliteit zal hebben. Partners met een andere denominatie, uit een plaats met een vermeende andere cultuur en partners uit de stad worden gezien als 'een ander slag' mensen en worden daarom vermeden als potentiële partner. Lokale culturele verschillen vormen derhalve ruimtelijke hindernissen die de kans op partnerkeuze in bepaalde gebieden verkleinen. De sociale controle is in Vriezenveen vrij sterk aanwezig, waardoor de dorpsbewoners meestal veilige partnerkeuzes maken: een partner van dichtbij, het liefst uit een goede familie en van dezelfde kerk.

De verzameling artikelen in dit proefschrift heeft laten zien hoe belangrijk ruimtelijke homogamie is in partnerkeuze, hoe patronen van ruimtelijke

homogamie kunnen worden verklaard, en heeft het fenomeen in een context geplaatst om te begrijpen wat de rol is van ontmoetingsplaatsen en van afstand in het proces van partnerkeuze. Er is gebruik gemaakt van zowel kwantitatieve als kwalitatieve gegevens. Met behulp van register gegevens werd de ruimtelijke dimensie van partnerkeuze van een hele bevolking in kaart gebracht, en koppelingen met andere gegevensbronnen boden de mogelijkheid om te analyseren hoe ruimtelijke homogamie verschilt naar achtergrondkenmerken van partners. Met behulp van enquête gegevens werd inzicht verkregen in de ontmoetingsplaatsen van groepen mensen. Het focus groep-onderzoek liet zien hoe mensen in Vriezenveen een partner kiezen, en wat de betekenis van afstand is in dit proces. 'Geography matters', ook in partnerkeuze.

UUT-IENZETTING AS BEWIESSTUK (PROEFSCHRIFT)[50]

In ’t kort stiet dit d’r:
Het kiezen van een leavenskammeroad wördt ok bepoald deur geografische zaken. Dizze uut-ienzetting hef ’t d’r oaver dat het kiezen van een leavenskammeroad ok of kan hangen van geografische meugelijkheden. Vrogger studiewark hef al loaten zien dat stellegies vake gelieke bint an mekare as het giet um dat wa’j eleerd hebt, oen wark, oen sociale plekke, oen leeftied en oen godsdienst. Dit gelieke wean nuumt wi’j homogamie. Ruumtelijke homogamie, ze zegt ok wel geliekheid van stellegies woar dat hun geografische ofkomst anbelangt, hef in dat soort onderzuken ja amper-an andacht ehad. Dit stuk löt zien dat ruumtelijke homogamie vake de deure lös döt as het het d’r op an komt bi’j het kiezen van een leavenskammeroad. In zes artikels he’k op meerdere wiezen mien licht loaten schienen oaver die ruumtelijke kaanten van de ‘Jennechies-markt’[51].

In hoofstuk 2 krie’j een beschrieving van de rolle van de geografische ofstand bi’j het kiezen van een partner in Nederlaand. Ik gebruken doarbi’j wat het bevolkingsregister angef oaver alle luu die in 2004 bint goan samenwonen. Wa’k doar evunden hebbe, he’k ekoppeld an geografische coördinaten van de adressen van de stellegies en toen kon’k met gemak de ofstanden uutrekenen tussen de jongs en de magies veurdat ze bi’j mekare gungen wonen. Wat blek noe; Nederlaanders vindt heur wederhelfte op naar körte ofstand. Meer as de helfte vun zien moat binnen de zes kilometer; ien-derde wonen ja in dezölfde gemeente.

[50] This summary was translated from Dutch to Tweants by Thea Kroese.
[51] ‘Jennechiesmarkt’ was de joarmarkt woar de jonge luu vrogger vake heur partners vunden, de partnermarkt dus.

Zo deur 't leaven hen gungen de anstoande koppelties alverdan dichter bi'j mekare wonen. As ze bi'j heur geboorte deur mekare nog zon 44 kilometer van mekare of woonden, was dat 5 joar veurdat ze de billen bi'j mekare gooiden nog mar 27 kilometer en vlak veur 't samenwonen 23 kilometer.

Ruumtelijke homogamie veraandert ofhankelijk van de demografische en sociaal-economische groep woar a'j bi'j heurt. Oalderen en luu die bi'j de oalders bint blieven wonen en luu die niet zovölle eleerd hebt woont het körtste bi'j mekare. Jongern, meansen die allennig bint, gescheiden luu en luu met de kop vol geleerdheid woont wieder vut van mekare. Dan is d'r ok nog es een keer ruumtelijke ofwisseling in ruumtelijke homogamie. In meer stadsere, dichter bewoonde stukken van oons laand wördt de ofstaand woarop de meansen mekare vindt alverdan körter. Woar völle luu bint en völle wark en völle onderwieskaansen, doar krie'j ok körtere ofstaanden tussen die partners. Da's net aansumme in aan de raand elegen plekken met weanig bewoners en ruumtelijke homogamie springt gloepens in 't oge in de Biebelbelt, in steden en in 't noorden en oosten van Nederlaand.

Die streekverschillen in ruumtelijk homogamie uut hoofstuk 2 wördt uut elegd in hoofstuk 3. In een ruumtelijke regressie is de 'vaste estealde ofstaandscoëfficiënt' vorm egeaven. Dizze coëfficiënt is gelieke an de gemiddelde ofstaand tot de partners, an epast veur woonplaatse en bevolkingsdichtheid, um vaste te leggen veur de gemiddelde ofstaand tot aandere Nederlaanders. Um de verschillen per streek in die ofstaandscoëfficiënt uut te leggen he'k drie soorten van uutleg egeaven. Doarbi'j bin'k uut egoane van vroggere onderzuken: wat veur soorten volk, ruumtelijke determinanten en culturele verschillen per streek. Ik heb heel wat of ezöcht. Ik bin begunnen met het partnerbestaand uut hoofstuk 2. Wat d'r ezegd wördt oaver uutleg komt uut de streekstatistieken van het CBS en ik bin ok te roade egoan bi'j allens wat de Informatie Beheer Groep doaroaver hef. Dat zeg ok wat van wat de luu eleerd hebt, zo-as een universiteit of zoiets. D'r wörden ok anwiezings gebruukt veur de streekcultuur. A'j 't uut mekare haalt, ku'j zien dat de streekverschillen in ruumtelijke homogamie veural te begriepen bint a'j kiekt noar sociaal-economische kenmarken van de partners en noar die streekculturele anwiezings. In streken woar as völle luu woont met een hoop geleerdigheid en met een best inkommen, doar vindt ze vake een leavenskammeroad die völle wieder weg woont. Ik zegge oe dat dat vaste komt umdat ze zich minder met heur eagen plaatse bezighoaldt en ze hebt meer geld um te reizen. Dan he'j nog de luu die as arg op heurzölf bint en zich gloepens völle gaangs hoaldt met postmaterialisme (die luu hoeft van allens niet meer zovölle). Ik zegge 't oe, doar bint de ofstaanden ok groter. Ik heb dat met emaakt en dat klopt met de modernisatie-

theorie. Die zeg ja dat greanzen tussen groepen alverdan meender stark wördt as ze an ’t moderniseren sloat. Ie weet wel as d’r meer luu komt die as hen leren goat, meer meansen die reist en ok alverdan zölfstaandiger. Ik heb nargens vaste kunnen bewiezen dat dialect en godsdienst ok met speult in de ruumtelijke homogamie.

Hoofstuk 4 nöalt wieder oaver de streekgebunden verschillen in ofstaand tussen partners en doar vergeliek ik ok ‘körte ofstaand homogamie’ (het veenden van een leavenskammeroad binnen de eagen gemeente) met ruumtelijke heterogamie (het veenden van een leavenskammeroad in ’t butenlaand). De ofwisseling per streek in die beaide verschiensels ku’j uutleggen. Dat hek ’edoan deur te kieken noar de regressie die kwam deur geografische, sociaal-economische, demogra-fische en culturele bepoalings. Verschillen per streek in körte ofstaand homogamie ligt veural an geografische anwiezings, benaamd lig ’t d’r an hoe groot zon gebied is en hoevölle volk as d’r woont en of het vlak bi’j België of Duutslaand lig. As die streken ok nog cultureel aans bint, ku’j dat ok nog marken in de verschillen in körte ofstaand homogamie. Dat is slimmer in oalderwets-protestaantse plaatsen, in plaatsen woar a’j meer op mekare an ewezen bint en in Frieslaand. Bi’j ruumtelijke heterogamie mu’j veural kieken hoe as het volk dat d’r woont is samen esteald: op plekken met völle butenlaanders is völle meer ruumtelijke heterogamie, mar langs de greanzen is dat ja aansumme, net as op oalderwets-protestaantse plekken en doar woar as Fries of Nedersaksisch wördt eproat.

Woar as ie oen partner teagenkomt a’j op zuuk bint noar een leavenskammeroad, doar giet ’t umme. In hoofstuk 5 he’k hulpe ehad van wat ze evunden hebt bi’j het Onderzuuk Gezinsvormung 2003 van het Centraal Bureau voor de Statistiek. Doarbi’j vreugen ze hoe en woar a’j oen partner bint teagen ekommen. Dat hoofstuk löt zien dat ontmoetingspekken maatschappelijk aans bint. Partners die as uut hetzölfde soort nöst komt vindt mekare op plaatselijke ‘Jennechies-markten’. Zukke markten ku’j verdelen a’j kiekt of ze al eerder samen ewoond hebt, wat as ze eleerd hebt, hoe oald ze bint, wat veur karke as ze hebt en de geografie. Zukke plekken ku’j ok weer beschrieven, want de iene plekke is de aandere ja niet. Kiek mar: ie hebt openbare plekken (zo as doar woar a’j uutgoat), besleuten plekken (zo as schoelen en warkplekken) en plekken van oezölf (zo as bi’j oen kammeroaden thuus). Ie vindt oen partner veural op openbare plekken. Het giet hier benaamd wel oaver jongeluu, roomsen, luu die niet zovölle eleerd hebt en meansen die op egreuid bint op ’t plattelaand. Mar ienderde deel van de Nederlaanders komt zien partner teagen op eagen arf, bi’j kammeroaden of zo. Dat bint vake luu die moslim bint, niet völle eleerd hebt en op egreuid buten oons

laand. Ienviefde deel komt mekare teagen op besleuten plekke; ze bint vaker al zowat volwassen, hebt meer eleerd, vanni'js op zuuk noar een partner, gereformeerd en op egreuid in de stad. Plaatselijke 'Jennechiesmarkten' onstoat al noar gelang van de luu die as doarin gaangs bint. A'j op zuuk bint noar een partner dan hoal ie, of ie wilt of niet, zoonder da'j d'r arg in hebt, rekkening met maatschappelijk- en cultureel bepoalde leavensregels. Ok de kaansen, die a'j hebt um meugelijke parners teagen te kommen, speult met.

Hoofstuk 6 beschref oarig dudelijk al die soorten van homogamie um uut te veenden hoe belangriek of die ruumtelijke homogamie nou wel is a'j kiekt noar demografische, sociaal-economische en culturele homogamie bi'j 't kiezen van een leavenskammeroad. Dat model komt van 'random utility', doar bedoelt ze met dat luu de partner kiest woar as ze van deankt dat-e het meeste opsmet. Ze deankt dan dat dat veural zo is as ze op mekare liekt as het giet um de geogra-fische, demografische,sociaal-economische en culturele achtergroond. Een meanse kös een levenskammeroad uut een groep meugelijkheden die geografisch ver-spreid bint oaver het laand. Dit keuzemodel giet van dezölfde gegevens uut die a'j elezen hebt in de hoofstukken 2, 3, en 4, en die sluut ie dan weer an bi'j de geografische coördinaten, sociaal-economische gegevens uut het Sociaal Statistisch Bestaand, onderwiesgegevens van de Informatie Beheer Groep en de verkiezingsuutslagen. Iederiene is verbunden an zien echte leavenskammeroad en an zeuven meuglijke aandere parners um d'r achter te kommen woarumme die echte partner ekeuzen is. De uutkomst löt zien dat ruumtelijke homogamie völle meer kaansen gef op een goeie ansluting met die partner. Zölfs nog a'j rekkening hoaldt met aandere menieren van homogamie. De ofstaand speult veural een grote rolle bi'j luu met niet völle meer dan lägere schoele en ok bi'j de platte-laands jongeluu. Nog wat ni'js: culturele homogamie zet an töt het angoan van een relatie, natuurlijk nöast de sociaal-economische, demografische en ruumtelijke homogamie.

Ik heb ok een stukkie onderzuuk edoane in Venne um te kieken hoe ofstaand een rolle speult bi'j het kiezen van een leavenskammeroad. Dit Overiesselse dorp is kats aans as zien umgeving as het giet um godsdienst en taal (dialect). In de veurige hoofstukken ha'k evunden dat plaatselijke culturele verschillen van belang bint a'j gaangs bint met 't kiezen van een leavenskammeroad en nou wol ik juust doar kieken hoe dat doar fealijks zit. In hoofstuk 7 ku'j lezen wat de uutkomsten waren van dat oonderzuuk op basis van focus groep gedissel. Doarin he'w be-spreuken hoe of die dorpsbewoners een partner kiest, wat ze het liefste hebt, of ze doarbi'j ok luustert noar aandern, woar ze hen goat um meugelijke partners te vin-den en of de ofstaand d'r ok met te maken hef. Een partner van dichte bi'j ziet ze

as maklijk en eagen. Dat gevuul van keundigheid komt deurdat ze ofweet van de achtergroond en de femilie van de meuglijke partner. Ok weet ze dan dat die partner uut hetzölfde dorp komt en dus ok wel net zon cultuur zal hebben en net zo in mekare zit as-e zölf. Partners met een aander petroon, uut plaatsen woarvan ze deankt dat de cultuur en de leavenswieze aans is en partners uut de stad ziet ze as een aander slag volk en dat zuukt ze niet op. Plaatselijke culturele verschillen bint dus wel ruumtelijke obstakels woardeur a'j in een bepoald gebied niet zo rap een partner vindt. In Venne hoaldt ze mekare onmeunig goed in de gaten en doarumme maakt Venneluu vake een vealige keuze as het giet um een leavenskammeroad. Geern iene van körtbi'j, van een goed volkshuus en van de zölfde karke.

Dizze artikels bi'j mekare in dizze uut-ienzetting hebt oe dudelijk loaten zien hoe ruumtelijke homogamie een rolle van grote petaansie speult bi'j de het uutzuken van een leavenskammeroad en hoe a'j petronen van ruumtelijke homogamie kunt uutleggen. Dizze artikels beziet dit verschiensel van meerdere kaanten en dan ku'j begriepen wat bi'j het uutzuken van een leavenskammeroad de rolle is van de plekken woar a'j de aander teagenkomt en van hoe verre a'j van de aander of woont. Ik hebbe gebruuk emaakt van kwantitatieve en kwalitatieve gegeavens. Deur die registergegeavens wörden de ruumtelijke meugelijkheden bi'j het kiezen van een leavenskammeroad van een heel volk op de riege ezet. Dat he'k bi'j iene ebracht met aandere bronnen en toen kon'k opiens uut mekare halen dat die ruumtelijke homogamie verschilt as de achtergroond van de partners verschilt. Ik heb een onderzuuk edoane en met wat dat opbracht kreeg ik dudelijkheid oaver die ontmoetingsplekken van hele groepen luu. Het focus groep-onderzoek leut zien hoe de luu in Venne een man of een vrouw keuzen en ok dat dan de ofstaand met sprek. 'Geography matters', ok as het giet um het uutzuken van een kearl of een magie um samen met wieder te goan!

Naschrift Thea Kroese:
Nog iets over de spelling van deze West-Twentse variant van het Nedersaksisch. Ik heb bij de vertaling gebruikt gemaakt van de officiële spelling van het Twents, zoals die gepubliceerd is door TwentseWelle en de Kreenk vuur de Twentse Sproak. Hierbij worden woorden als lopen, worden, zeggen, vinden e.d. voluit geschreven terwijl bij het spreken de laatste e ingeslikt wordt en men zegt: loop'n, word'n, zegg'n, vind'n enz.
Verder wordt de oa-klank in bijvoorbeeld proaten en road e.d. geschreven als oa en uitgesproken als de o in het Nederlandse roze.
De lange èè-klank in woorden als fealijk schrijft men als ea.
In: 'Hij löp noar de karke' spreek je de ö-klank uit als bij het Duits.
De verlengde oa-klank (klinkt als langgerekt ö) in bijvoorbeeld nöalen schrijft men dus met öa.
In woorden als bi'j en mi'j wordt de i uitgesproken als de i in het Nederlandse win.
Voor meer informatie raadplege men het boekje 'Twents, hoe schrief iej dat? '

CURRICULUM VITAE

Karen Haandrikman was born in Vroomshoop, the Netherlands, in 1977. After finishing her bachelor in Human Geography, she went on to complete a Master's degree in Demography in 2000. During her Master's, she spent a few months as an Erasmus student at the University of Ulster at Coleraine in Northern Ireland. She conducted the fieldwork for her Master's thesis in Karnataka, India, on the influence of time perceptions on age and duration heaping in surveys. From 2000 to 2005, Karen was employed as an Assistant Professor in the Department of Demography, Faculty of Spatial Sciences of the University of Groningen. While at the university Karen has contributed to courses in Population Geography, Demography, Migration, Geographical Information Systems, Qualitative Research modules, Theories of Demographic Behaviour, and many different student projects. In addition, she has gained a didactical certificate for teaching. At the same time her research was about seasonal fluctuations in fertility and future demographic developments in the Northern Netherlands. From 2005 to 2010 she was a PhD student at the same University, working on the topic of geographical dimensions of partner choice in the Netherlands, a collaboration with Statistics Netherlands. Besides attending the course programme of Nethur, the Netherlands Graduate School of Urban and Regional Research, Karen completed the ERSA Advanced Summer School in Regional Science 'GIS and Spatial Econometrics'. Karen co-organized the Dutch Demography Day, a national conference, in 2005, and maintained websites for the University of Groningen, Population Research Centre in Groningen and the Netherlands Demographic Society. From July 2010 onwards, Karen will continue her research, which combines the disciplines of Demography and Geography, at Stockholm University, where she will work as a Postdoctoral Researcher on a project which examines the effect of birth place on the life course, using Swedish register data.